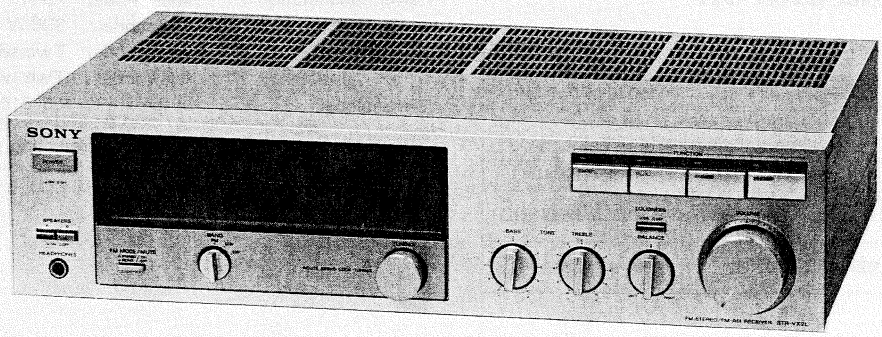
STR-VX2L

AEP Model
UK Model



FM STEREO/FM-AM RECEIVER

SPECIFICATION

Amplifier section

Continuous RMS power output
(less than 0.07% THD, both channels driven simultaneously)
At 1 kHz
30 + 30 watts (8 ohms)
At 20 Hz–20 kHz
25 + 25 watts (8 ohms)
According to DIN 45500
25 + 25 watts (8 ohms)
Power bandwidth (IHF) 15 Hz–35 kHz
Harmonic distortion Less than 0.07% at rated output
Intermodulation (IM) distortion (60 Hz : 7 kHz = 4 : 1)
Less than 0.07% at rated output
Damping factor 30 at 1 kHz, 8 ohms
Residual noise Less than 140 μV at 8 ohms

Inputs

	Sensitivity	Impedance	S/N	Weighting network
PHONO	2.5 mV	50 k ohms	75 dB	A
TAPE	150 mV	50 k ohms	95 dB	A
AUX	150 mV	50 k ohms	95 dB	A

Measured with rated output power into 8-ohm loads (both cannels driven simultaneously) at 1 kHz

Outputs

REC OUT	Voltage 150 mV, Impedance 10 k ohms
HEADPHONES	Accepts low or high impedance headphones
SPEAKERS	4–16 ohm speakers are suitable

Frequency response PHONO : RIAA equalization curve ±0.5 dB
AUX, TAPE : 10 Hz–45 kHz ±1 dB
Tone controls BASS : ±8 dB at 100 Hz
TREBLE : ±8 dB at 10 kHz
Loudness control (att. 30 dB)
+ 8 dB at 100 Hz

FM tuner section

Tuning range 87.5–108.0 MHz
Antenna terminals 300 ohms balanced, 75 ohms unbalanced
Intermediate frequency 10.7 MHz

	STR-VX2L (40 kHz deviation)
Sensitivity	at 46 dB quieting 18.3 dBf, 4.5 μV (mono) 40.2 dBf, 56 μV (stereo)
Usable sensitivity	11.2 dBf, 2.0 μV (IHF) 9.8 dBf, 1.7 μV (S/N 26 dB)
Signal-to-noise ratio	78 dB (mono), 72 dB (stereo)
Harmonic distortion (1 kHz)	0.15% (mono) 0.25% (stereo)

Separation 45 dB at 1 kHz

— Continued on page 2 —

MICROFILM

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SONY®

SERVICE MANUAL

Frequency response	40 Hz–12.5 kHz ±0.5 dB 30 Hz–15 kHz $^{+5}_{-2}$ dB
Selectivity	55 dB (300 kHz)
Capture ratio	1.0 dB
AM suppression ratio	54 dB
Image response ratio	50 dB
IF response ratio	90 dB
Spurious response ratio	70 dB
RF intermodulation	60 dB (IHF)
Muting threshold	Approx. 25.2 dBf, 10 μV

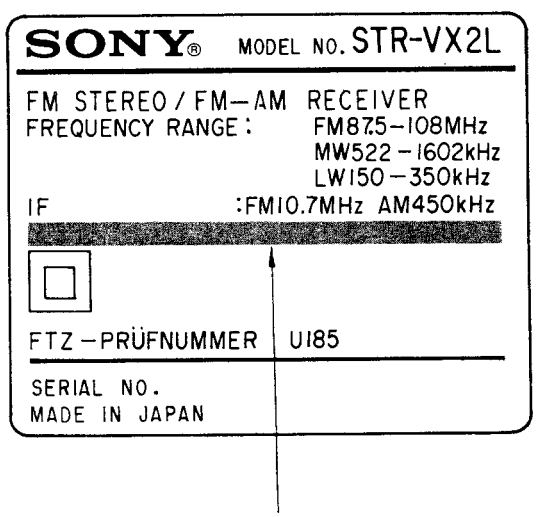
MW/LW tuner section

		MW	LW
Tuning range		522 kHz–1,602 kHz	150 kHz–350 kHz
Antenna		Built-in ferrite bar antenna, External antenna terminal	
Intermediate frequency		450 kHz	450 kHz
Usable sensitivity	built-in antenna	200 μV/m (1,000 kHz)	300 μV/m (230 kHz)
	external antenna	100 μV (1,000 kHz)	100 μV (230 kHz)
Signal-to-noise ratio (50 mV/m)		54 dB	54 dB
Harmonic distortion (50 mV/m, 400 Hz)		0.3%	0.3%
Selectivity		35 dB (9 kHz)	35 dB (9 kHz)

General

System	FM stereo, FM/AM superheterodyne tuner Direct coupled quasi-complementary symmetry power amplifier circuit (SEPP OTL)
Power requirements	AEP model: 220 V ac, 50/60 Hz UK model: 240 V ac, 50/60 Hz
Power consumption	AEP model: 70 W UK model: 330 W
AC outlets	AEP model: Two switched, total 100 W UK model: Two switched, total 200 W
Power consumption	AEP model: 70 W UK model: 330 W
AC outlets	AEP model: Two switched, total 100 W UK model: Two switched, total 200 W
Dimensions	Approx. 430×105×315 mm (w/h/d) (17 × 4 3/16 × 12 3/8 inches) including projecting parts and controls
Weight	Approx. 6.0 kg (13 lb 4 oz), net Approx. 6.5 kg (14 lb 6 oz) in shipping carton

MODEL IDENTIFICATION



AEP model:	AC 220V~	50/60Hz	70W
UK model:	AC 240V~	50/60Hz	330W

MELF (Metal Electrodes Face-Bonding) Components

Warning

If MELF components are forcibly removed from the printed circuit board with pincers or pliers, the circuit board pattern is likely to peel away. Always remove MELF components according to the procedure described on the next page. Replace MELF components with the lead type components.

MELF components are soldered directly to the surface of the printed circuit board.

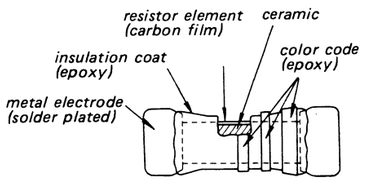
MELF resistors and capacitors have the same dimensions and are distinguished by their background colors: light brown for resistors, and pink or light green for capacitors.

The MELF resistor color coding is the same as for conventional resistors, and MELF capacitor color coding is the same as for tube-type ceramic capacitors. Note, however, that all MELF resistors are rated at ¼W and ±5%.

Components larger than resistors and without a color code are cross conductors, which are used instead of jumper wires.

1. Structure

(Resistors)



(Capacitors)

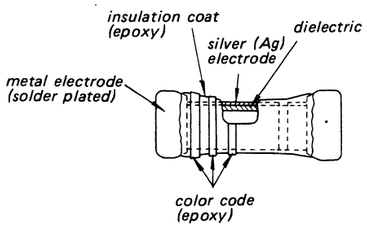
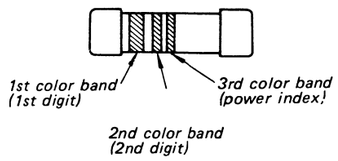
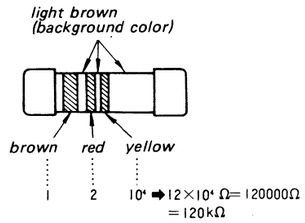


Fig. 1

2. Color Code Reading



(Example of Resistor)



(Example of Capacitor)

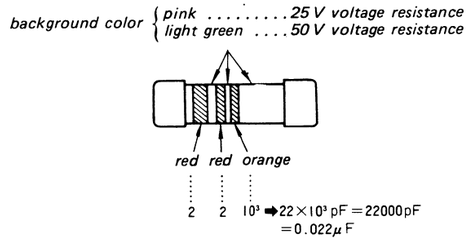

background color
pink .....25 V voltage resistance
light green ....50 V voltage resistance
red red orange
2 2 10³ ➡ 22×10³ pF = 22000pF
= 0.022μF

Fig. 2

3. How to Remove MELF Components and Mount Replacements

Use a soldering iron of at least 40W with an iron tip 4 mm in diameter and file the tip down to the angle shown in the diagram.

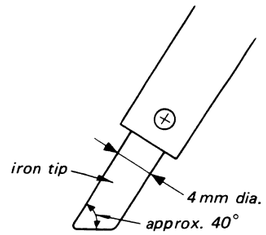


Fig. 3

1. Bring the flat surface of the soldering iron in equal contact with both soldered ends of the component.
2. The solder should melt in about 4 seconds. (The solder will melt more readily if a small amount of solder is attached to the iron tip and the iron tip is placed against the component.)
3. Once the solder has melted, tap the component aside with the tip of the soldering iron, and remove it from the board.

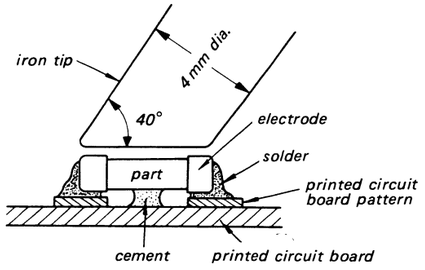


Fig. 4

4. Use lead type resistors or capacitors to replace the MELF components.
   These replacements may be mounted either with short leads (see Fig. 5), or by covering a lead with tubing (see Fig. 6).

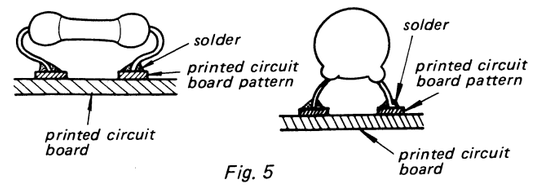
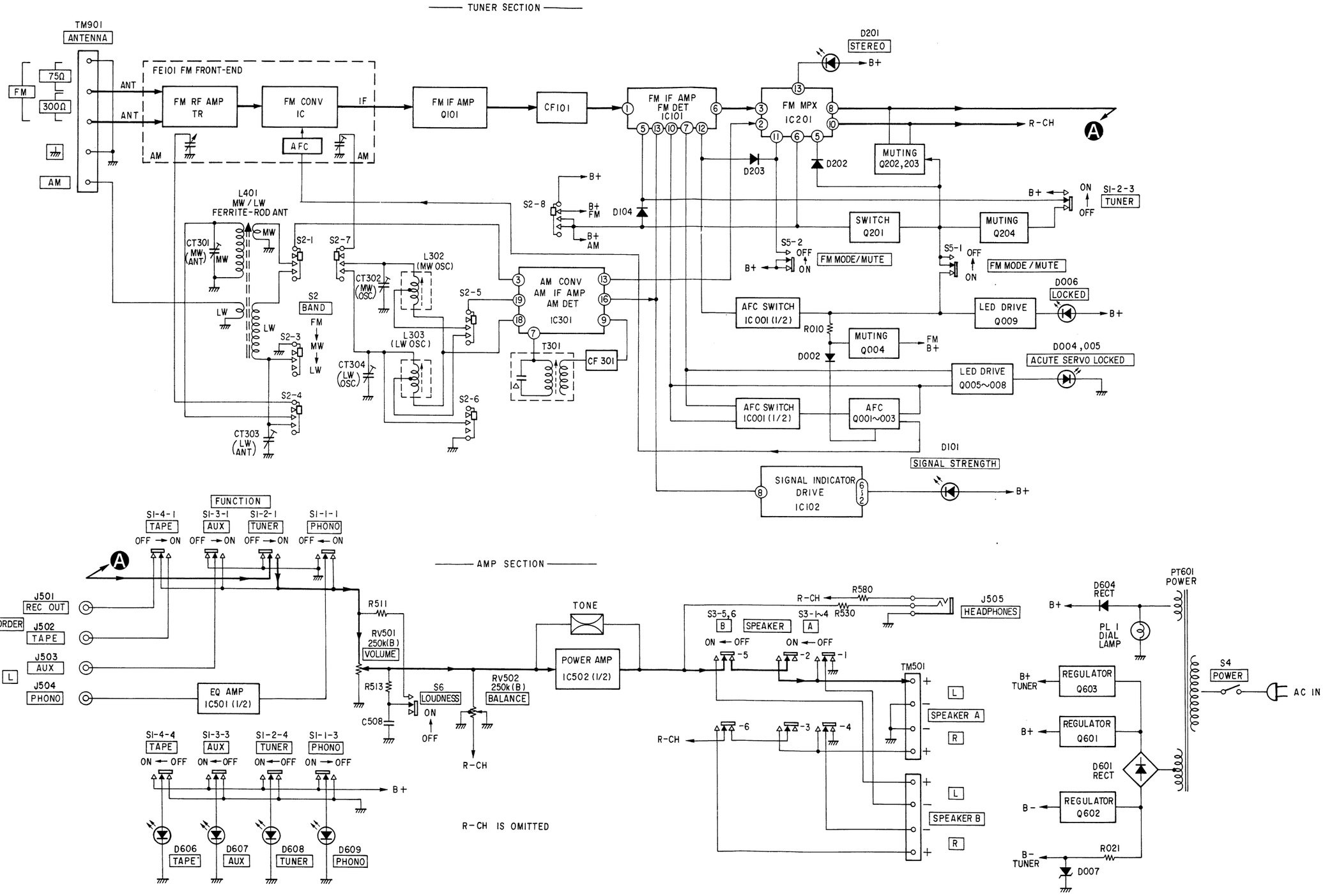


Fig. 5

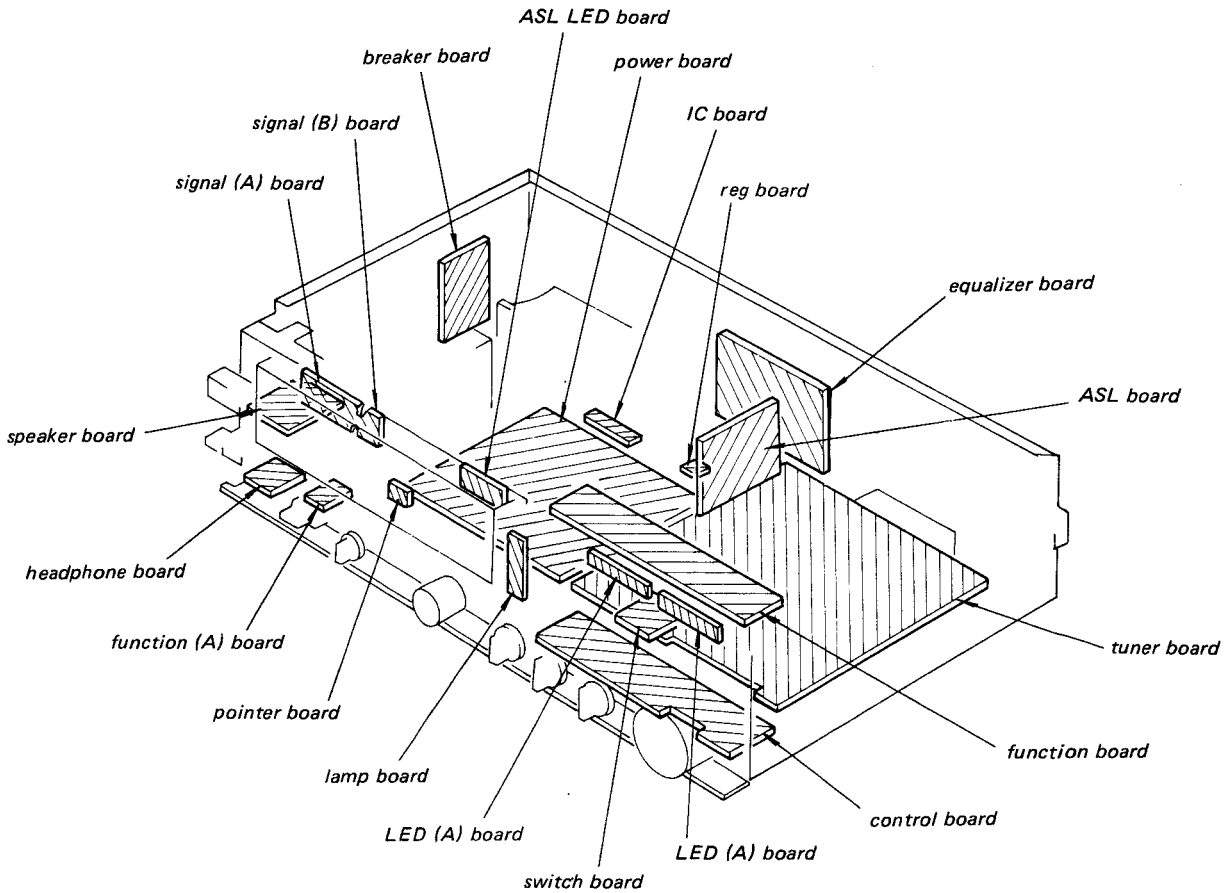
Fig. 6

SECTION 1
OUTLINE

1-1. BLOCK DIAGRAM



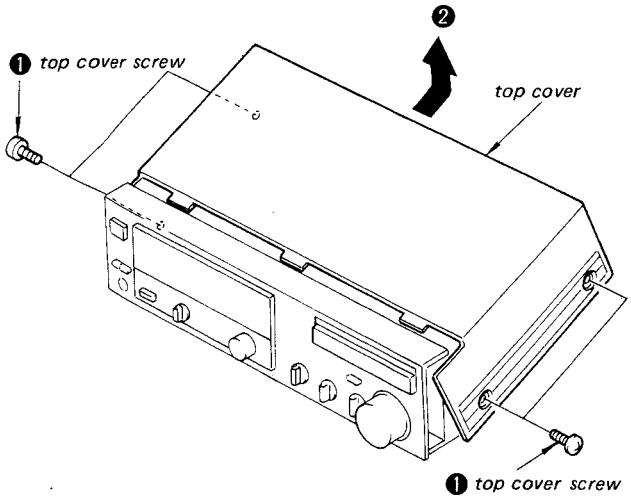
1-2. BOARDS LOCATION



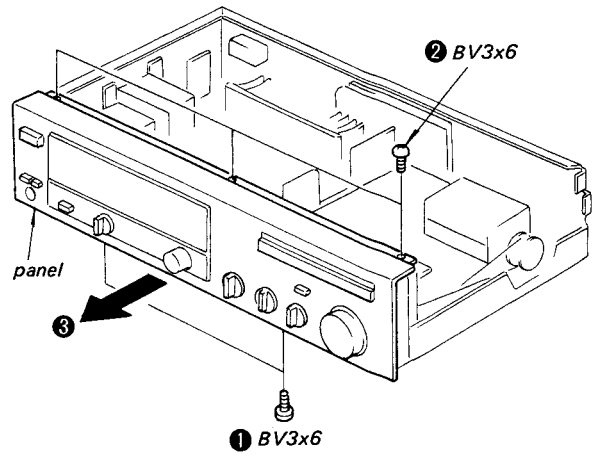
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

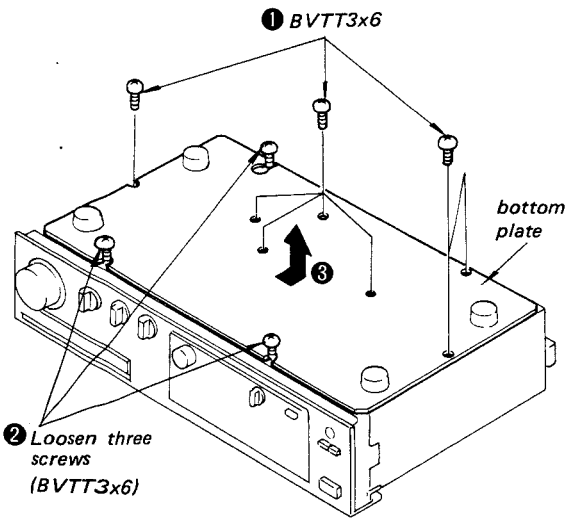
TOP COVER



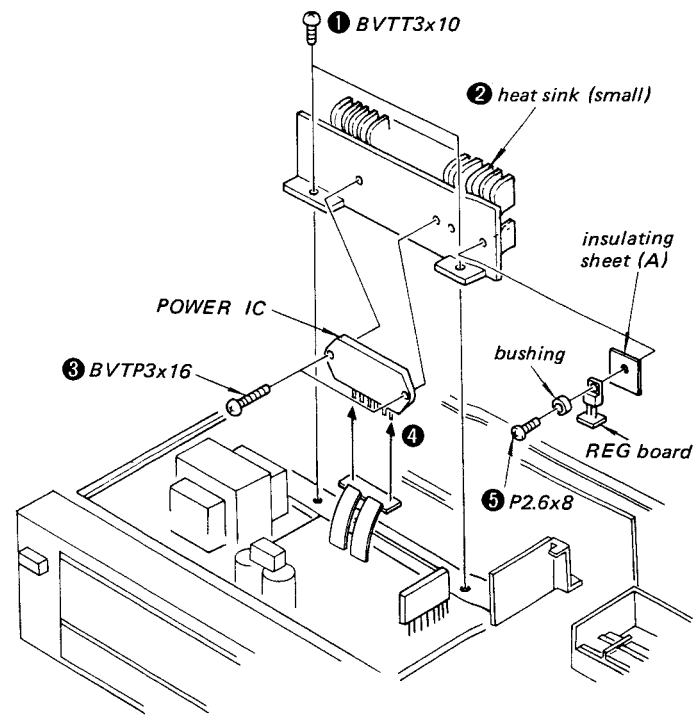
PANEL



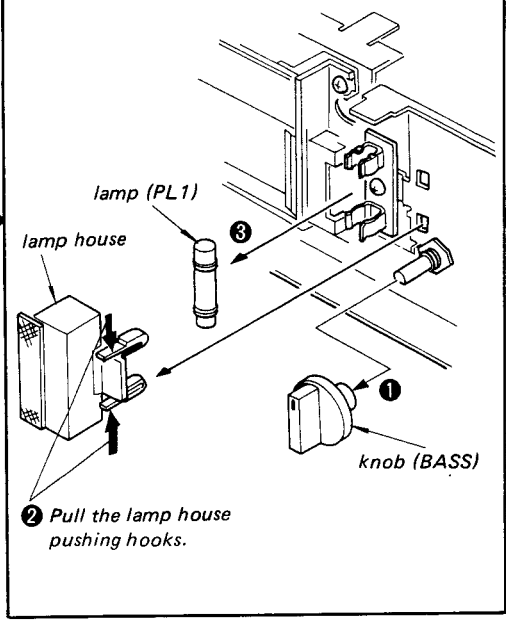
BOTTOM PLATE



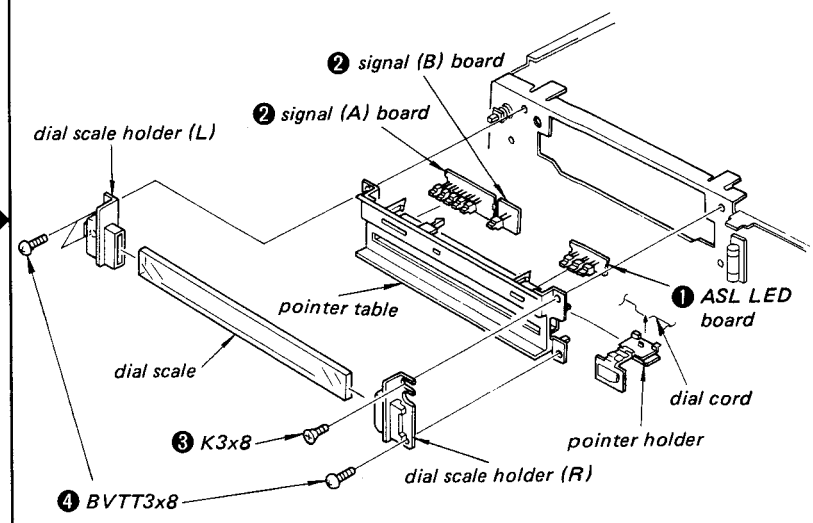
HEAT SINK/IC/REG BOARD



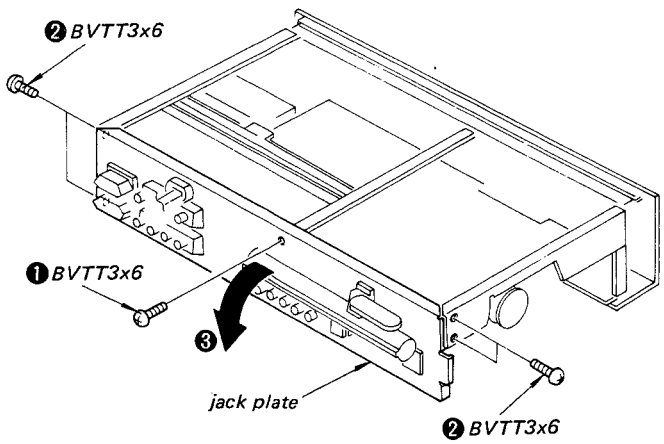
LAMP (PL1)



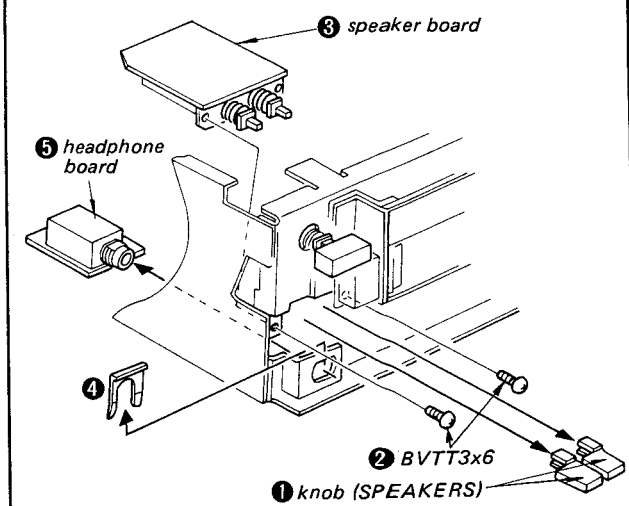
ASL LED BOARD/SIGNAL (A) BOARD/SIGNAL (B) BOARD/DIAL POINTER



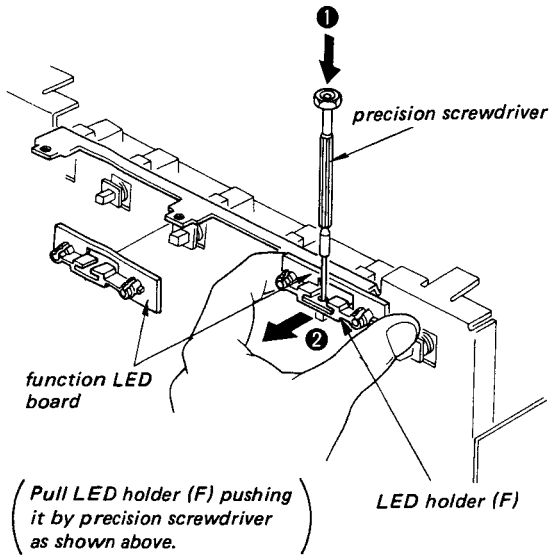
JACK PLATE



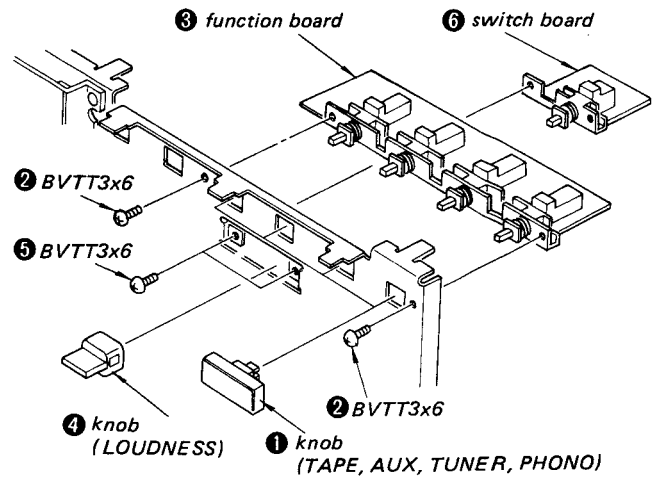
HEADPHONE BOARD/SPEAKER BOARD



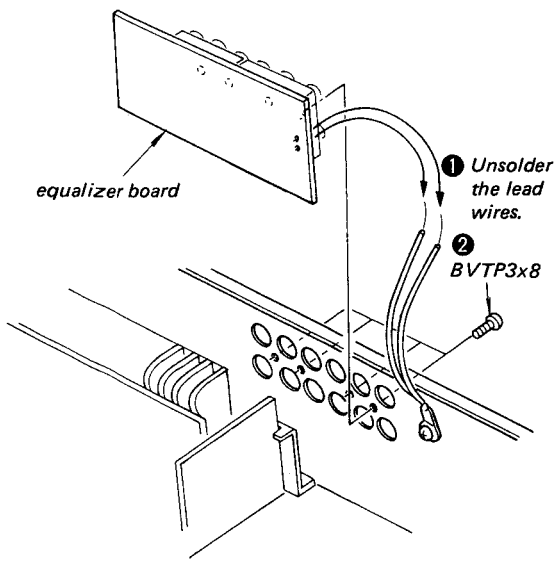
LED BOARD



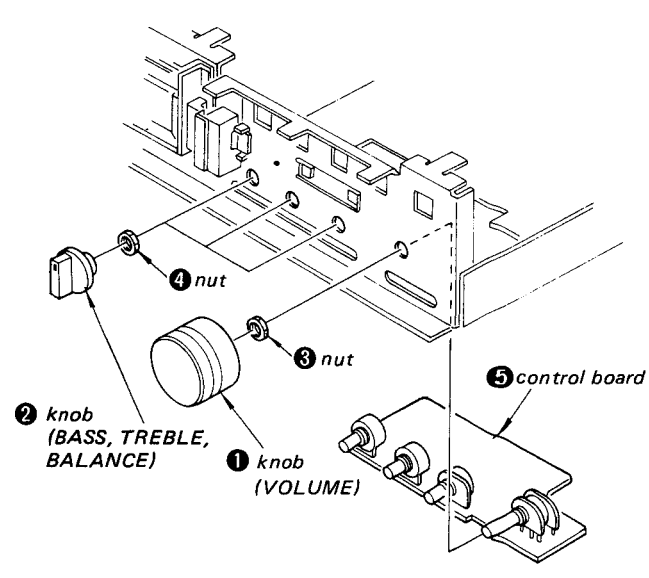
FUNCTION BOARD/SWITCH BOARD



EQUALIZER BOARD

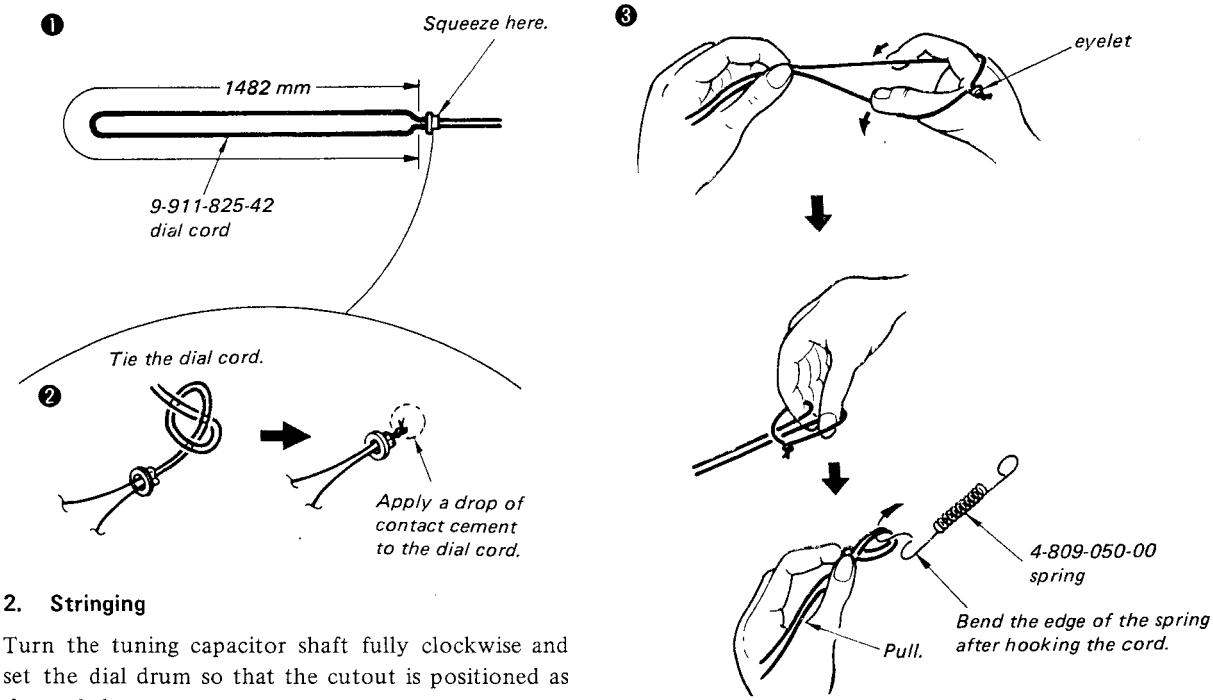


CONTROL BOARD



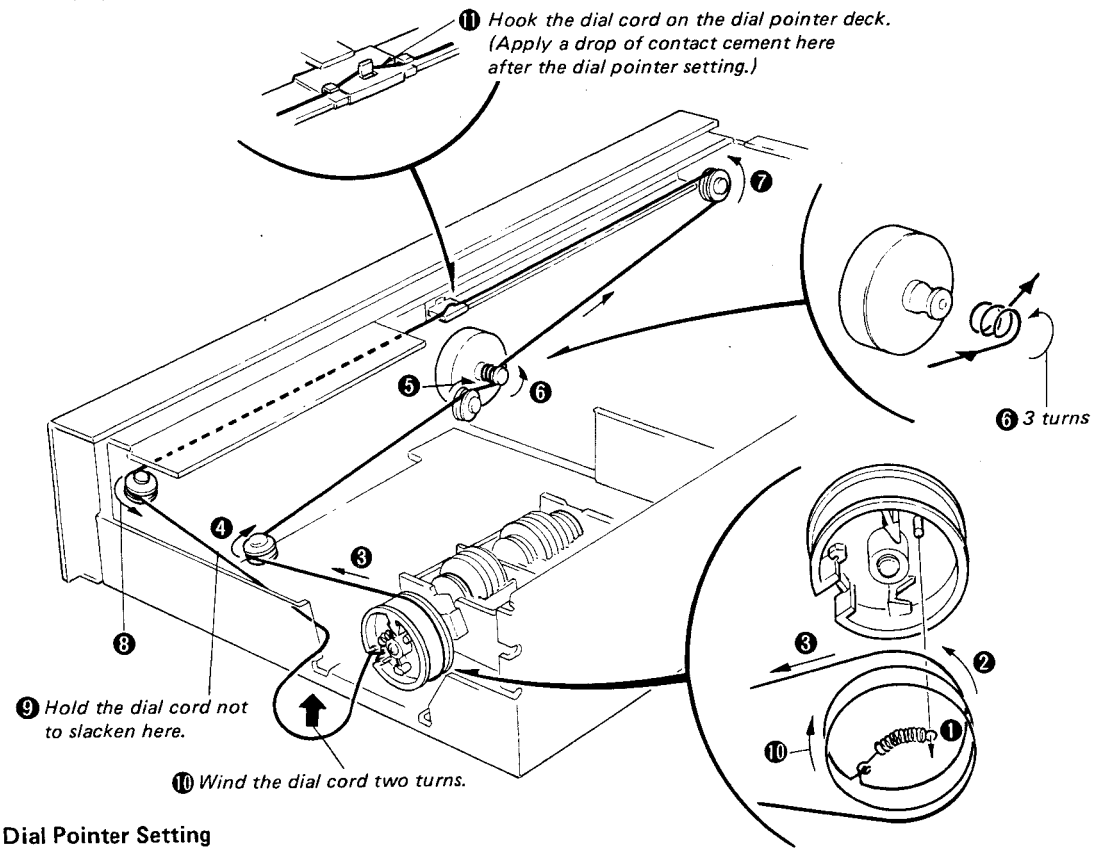
DIAL CORD STRINGING

1. Preparation



2. Stringing

Turn the tuning capacitor shaft fully clockwise and set the dial drum so that the cutout is positioned as shown below.

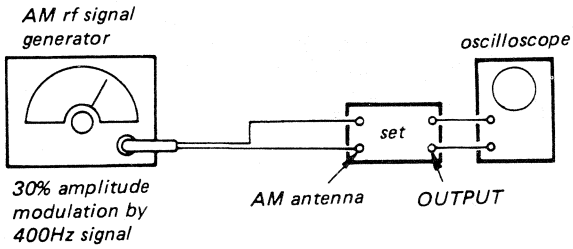


3. Dial Pointer Setting

- Receive the signal (98MHz) from the FM RF SSG and set the dial pointer to 98MHz on the dial scale.
- Apply a drop of contact cement to the dial pointer.

SECTION 3
ADJUSTMENTS

AM SECTION



Output level: as low as possible

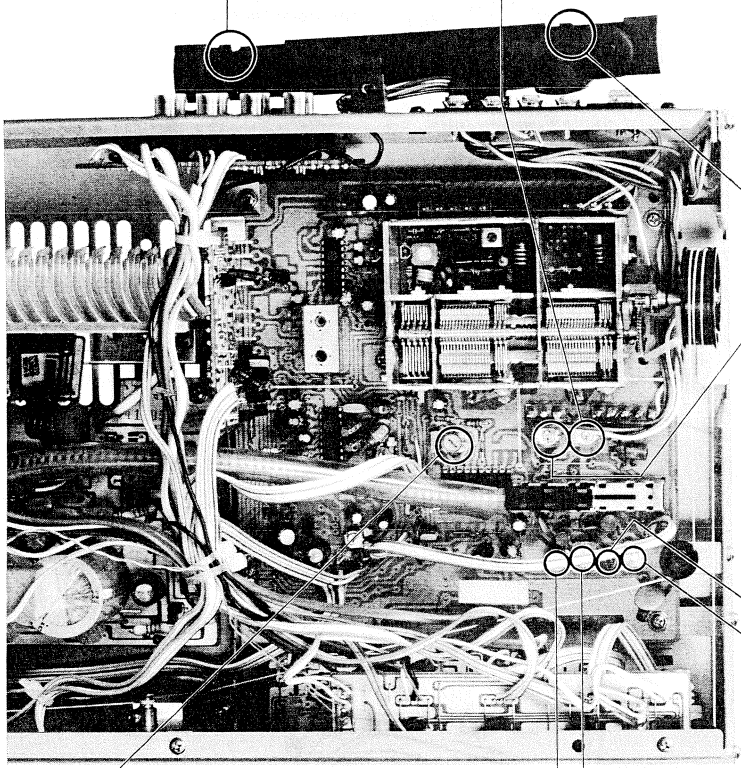
- Repeat each adjustment several times for maximum reading on oscilloscope.
- The MW/LW tuning adjustments and the tracking adjustment should be finally done by the trimmer capacitor.

Note:
Tuning and tracking adjustments of LW section should be made earlier than those of MW section.

MW TRACKING ADJUSTMENT

Perform this adjustment after the LW tracking adjustment.

adjustment parts	frequency of the signal generator
L501	600kHz
CT301	1,400kHz



LW TRACKING ADJUSTMENT

adjustment parts	frequency of the signal generator
L501	170kHz
CT303	310kHz

MW TUNING ADJUSTMENT

Make sure of the dial pointer setting before this adjustment. (Refer to the dial pointer setting on page 11.)

adjustment parts	dial pointer indication	frequency of the signal generator
L302	600kHz	600kHz
CT302	1,400kHz	1,400kHz

LW TUNING ADJUSTMENT

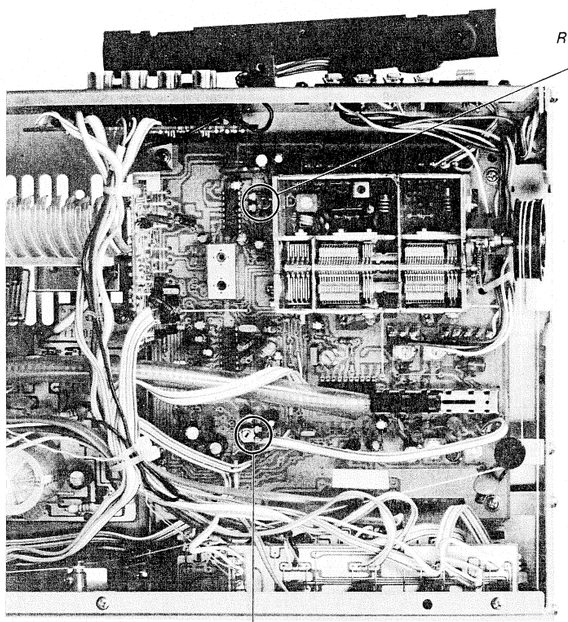
Make sure of the dial pointer setting before this adjustment. (Refer to the dial pointer setting on page 11.)

adjustment parts	dial pointer indication	frequency of the signal generator
CT304	310kHz	310kHz
L303	170kHz	170kHz

IF ALIGNMENT

adjustment part	frequency of the signal generator
T301	1,000kHz

FM SECTION

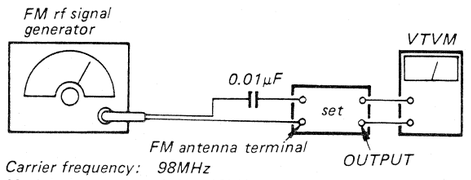


FM Muting Level Adjustment

Setting:

FM MODE/MUTE switch (S1): STEREO/ON

Procedure:



Carrier frequency: 98MHz
Modulation: 1kHz, 40kHz deviation (100%)
Output level: 10μV (20dB)

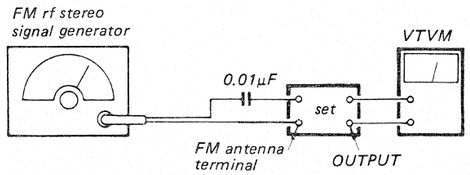
1. Tune the set to 98MHz.
2. Set the output level of the FM rf signal generator to 20dB (10μV).
3. Turn RT101 and stop it just when the VTVM indication suddenly decreases.

FM Stereo Separation Adjustment

Setting:

FM MODE/MUTE switch (S1): STEREO/ON

Procedure:



Carrier frequency: 98MHz
Output level: 1mV (60dB)
Mode: stereo
Modulation:
Audio (1kHz): 16.25kHz deviation
Pilot (19kHz): 7.5kHz deviation
Sub-channel (38kHz): 16.25kHz deviation

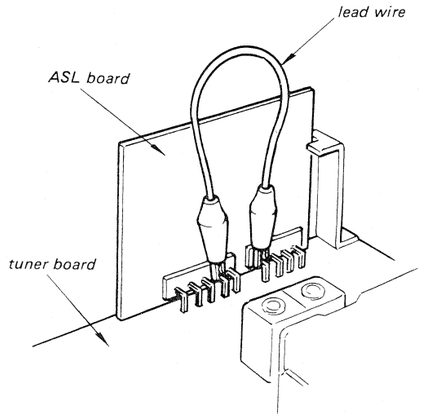
FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RT201 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RT201 for minimum reading.

L-CH Stereo Separation: Ⓐ – Ⓑ
R-CH Stereo Separation: Ⓒ – Ⓓ

The separations of both channels should be equal.

HOW TO TURN ASL OFF:

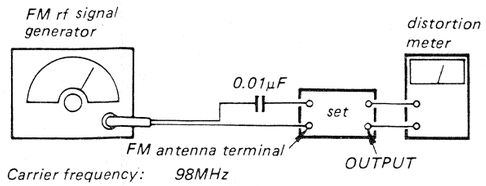
1. FM MODE/MUTE switch: MONO/OFF
2. Connect a lead wire as shown below.



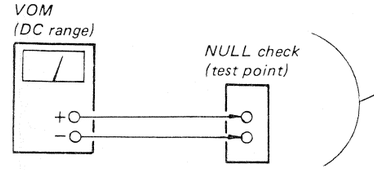
FM Discriminator Alignment

Turn ASL off. (See "How to turn ASL off" on page 14.)

Procedure:

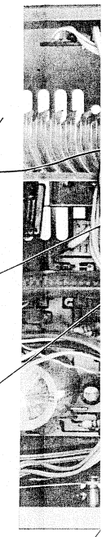


Carrier frequency: 98MHz
Output level: 1mV (60dB)
Modulation (100%): 1kHz, 40kHz deviation
Mode: mono



1. Tune the set to 98MHz.
2. Connect a VOM to NULL CHECK (test point) and adjust the primary-side core (red) of T101 for 0V DC reading on the VOM.
3. Adjust the secondary-side core (black) of T101 for a minimum reading on the distortion meter.

Note: Repeat the secondary-side and primary-side adjustments several times.



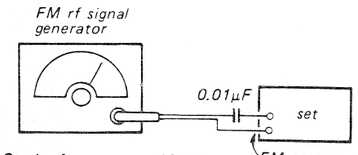
VCO Adjustment

A) Regular Method

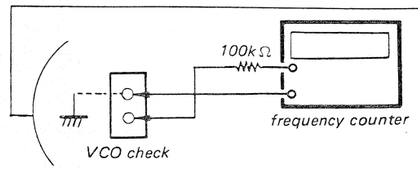
Setting:

Turn ASL off. (See "How to turn ASL off" on page 14.)

Procedure:



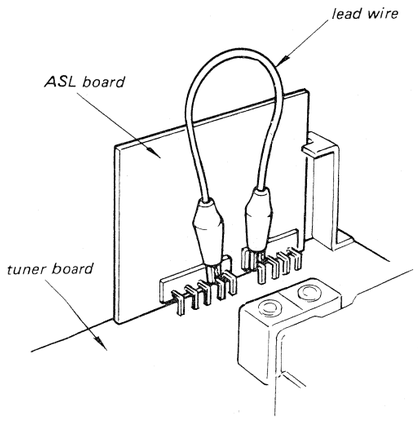
Carrier frequency: 98MHz
Modulation: no modulation
Output level: 1mV (60dB)



1. Tune the set to 98MHz.
2. Adjust RT202 for 19kHz ± 50Hz on the counter.

HOW TO TURN ASL OFF:

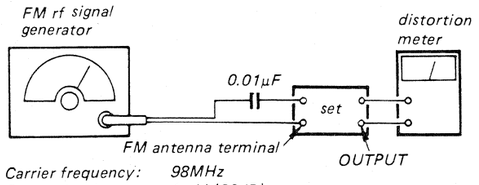
1. FM MODE/MUTE switch: MONO/OFF
2. Connect a lead wire as shown below.



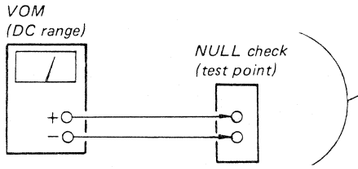
FM Discriminator Alignment

Turn ASL off. (See "How to turn ASL off" on page 14.)

Procedure:

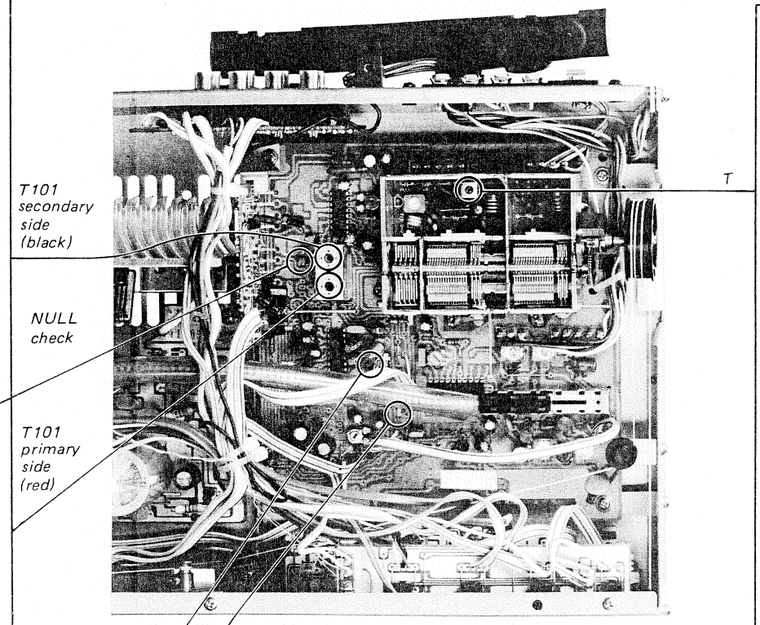


Carrier frequency: 98MHz
Output level: 1mV (60dB)
Modulation (100%): 1kHz, 40kHz deviation
Mode: mono



1. Tune the set to 98MHz.
2. Connect a VOM to NULL CHECK (test point) and adjust the primary-side core (red) of T101 for 0V DC reading on the VOM.
3. Adjust the secondary-side core (black) of T101 for a minimum reading on the distortion meter.

Note: Repeat the secondary-side and primary-side adjustments several times.



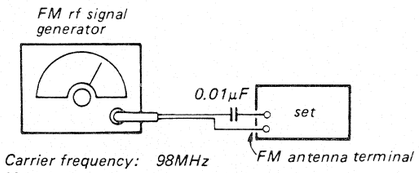
VCO Adjustment

A) Regular Method

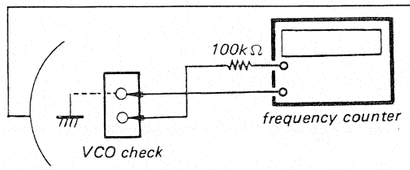
Setting:

Turn ASL off. (See "How to turn ASL off" on page 14.)

Procedure:



Carrier frequency: 98MHz
Modulation: no modulation
Output level: 1mV (60dB)



1. Tune the set to 98MHz.
2. Adjust RT202 for 19kHz ± 50Hz on the counter.

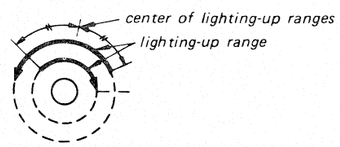
B) Simple Method

Setting:

Turn ASL off. (See "How to turn ASL off" on page 14.)

Procedure:

1. Tune the set to the FM stereo broadcasting signal.
2. Turn RT202 clockwise or counterclockwise and memorize the lighting-up range of the stereo lamp.
3. Secure RT202 at the center of the lighting-up range of both turns as shown below.



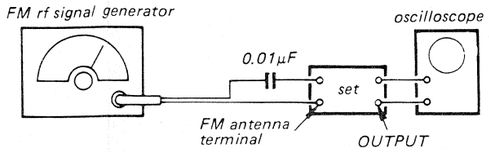
The FM front-end is carefully adjusted at the factory and is supplied as one whole block for replacement. In case of replacement, perform the following adjustments.

1. Front-End IFT Adjustment.

Setting:

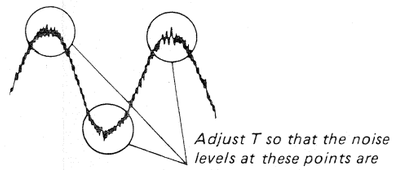
Turn ASL off. (See "How to turn ASL off" on page 14.)

Procedure:



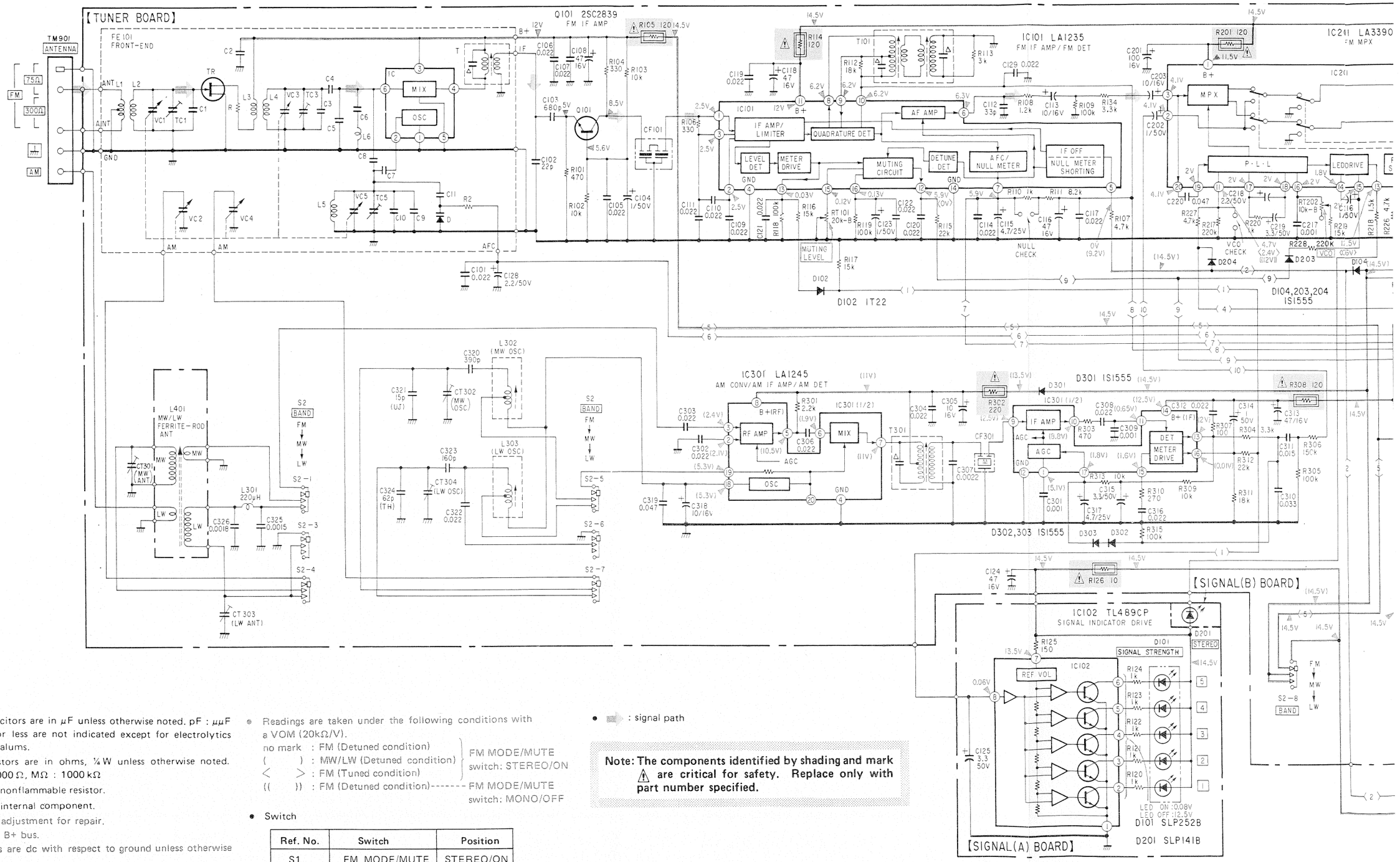
Carrier frequency: 98MHz
Modulation: 1kHz, 40kHz deviation (100%)
Output level: 2μV (6dB)

Adjust T so that the noise levels at the peak of the waveforms on the oscilloscope are symmetrical and the output level is maximum.



2. Dial Pointer Setting
(Refer to Dial Pointer Setting on page 11.)
3. MW/LW Tuning Adjustments
(Refer to MW/LW Tuning Adjustments on page 12.)

4-1. SCHEMATIC DIAGRAM — TUNER SECTION



Note:

- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, ¼W unless otherwise noted. kΩ : 1000Ω, MΩ : 1000kΩ
- : nonflammable resistor.
- △ : internal component.
- : adjustment for repair.
- : B+ bus.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- Readings are taken under the following conditions with a VOM (20kΩ/V).

no mark	: FM (Detuned condition)	FM MODE/MUTE switch: STEREO/ON
( )	: MW/LW (Detuned condition)	
< >	: FM (Tuned condition)	
(( ))	: FM (Detuned condition)	FM MODE/MUTE switch: MONO/OFF

- Switch

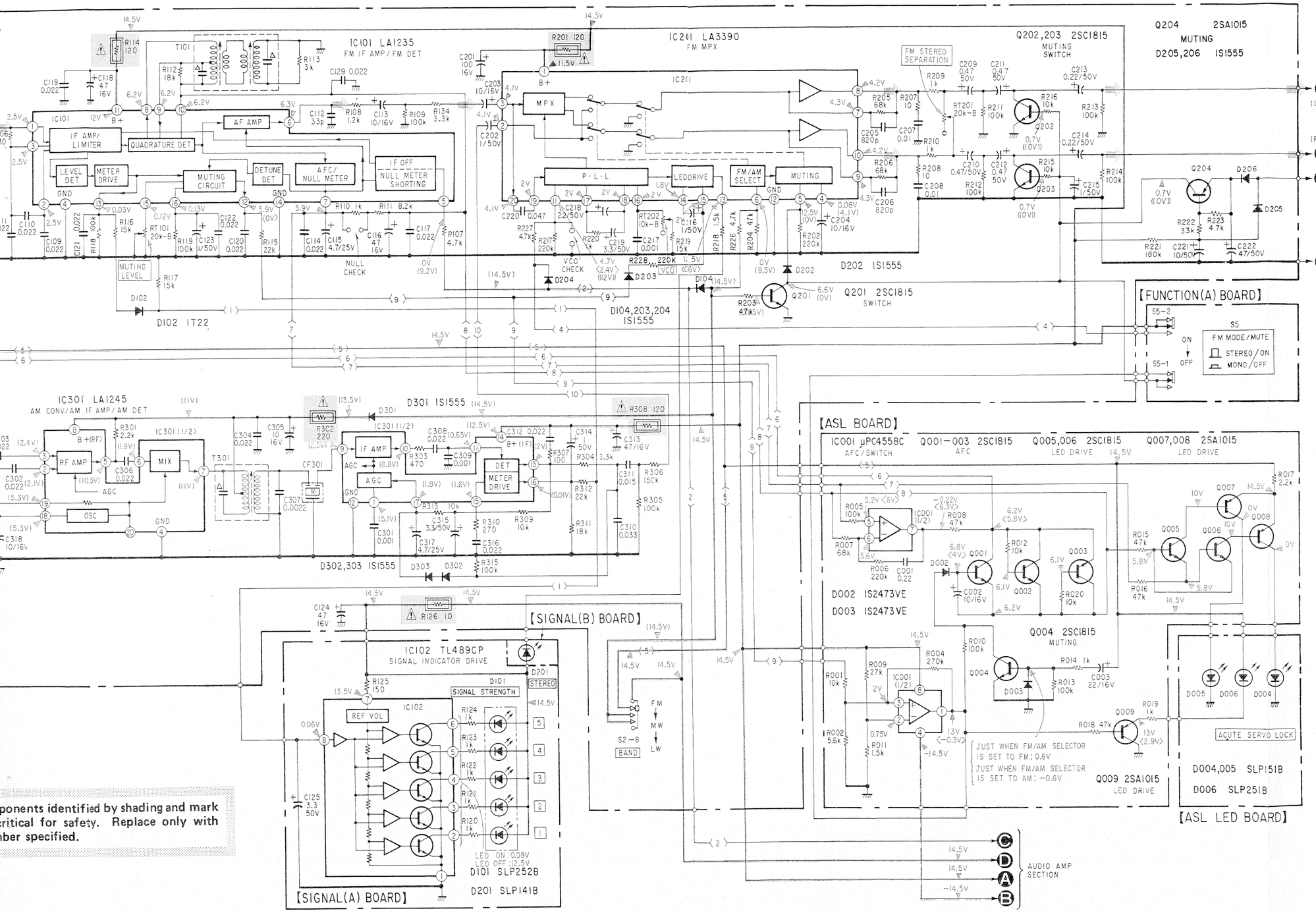
Ref. No.	Switch	Position
S1	FM MODE/MUTE	STEREO/ON
S2	BAND	FM

- : signal path

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

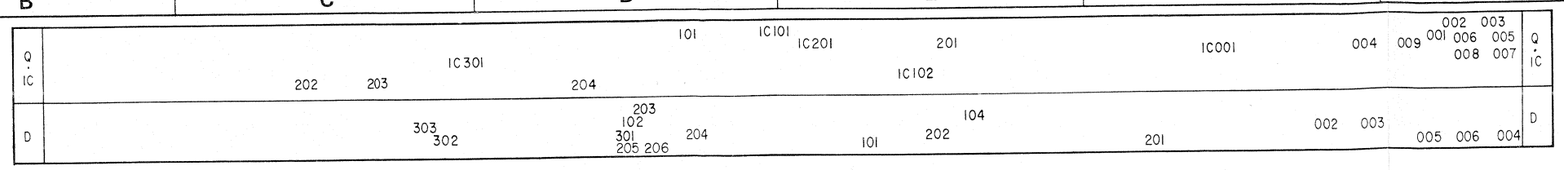
E F G H I J K

1 2 3 4 5



components identified by shading and mark critical for safety. Replace only with number specified.

4-2. MOUNTING DIAGRAM — TUNER SECTION —



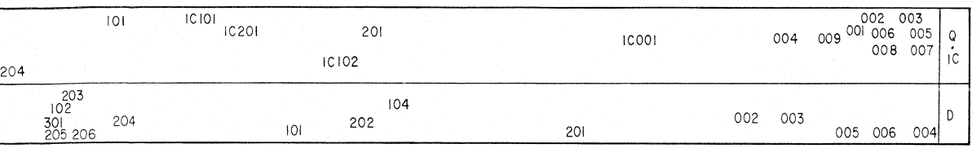
Note:

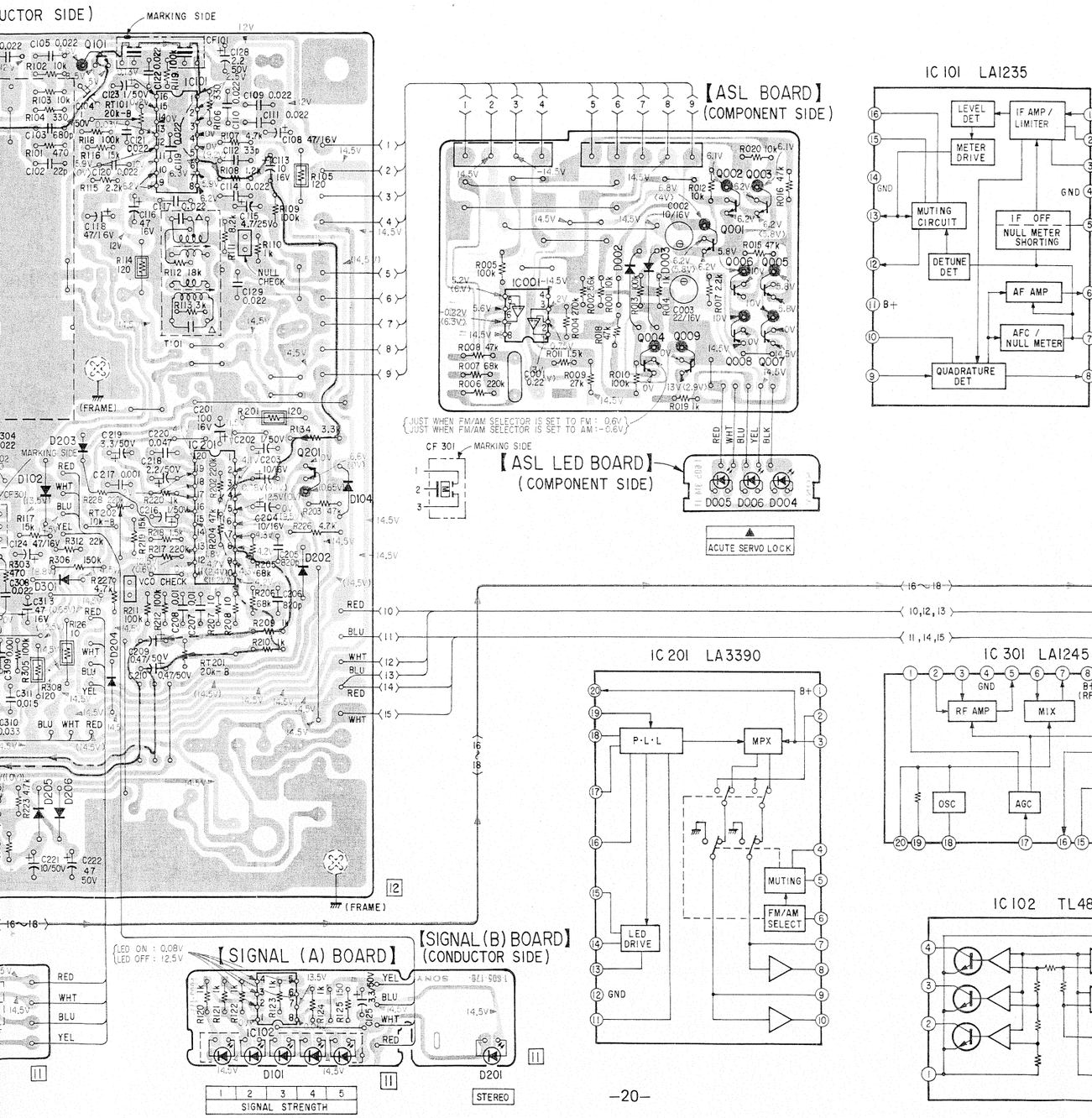
- ▪ : indicates side identified with part number.
- ▪ : B+ pattern
- ▪ : signal path
- ▪ : L-CH signal path
- ▪ : R-CH signal path
- ▪ Readings are taken under the following conditions with a VOM (20kΩ/V).
  - no mark : FM (Detuned condition)
  - ( ) : MW/LW (Detuned condition)
  - < > : FM (Tuned condition)
  - (( )) : FM (Detuned condition)

  FM MODE/MUTE switch: STEREO/ON

  FM MODE/MUTE switch: MONO/OFF

D E F G H I

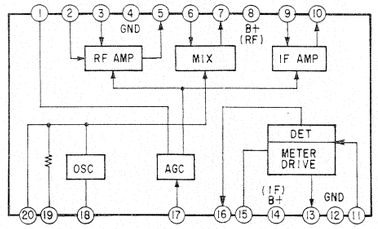




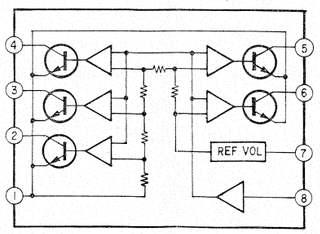
IC 101 LA1235

IC 201 LA3390

IC 301 LA1245

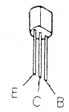


IC 102 TL489CP



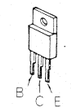
Semiconductor Lead Layouts

2SA1015
2SC1364

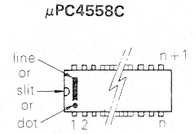


2SC2839

2SD743-Q

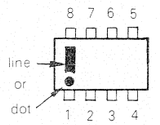


LA1235
LA1245
LA3390
TC489
μPC4558C



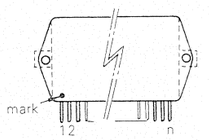
(Top view)

NJM4560A



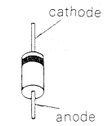
(Top view)

STK463

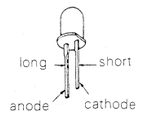


(Marking side view)

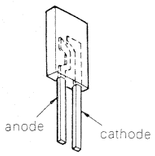
10E2
1S1555
1T22AM
EQA01-13R
EQA01-15R



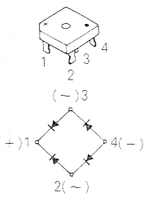
GL-3NG95



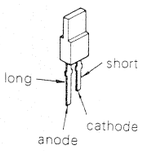
GL-9HY22



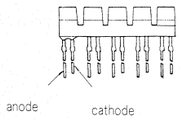
S2VB20



SLP141B
SLP151B
SLP251B



SLP252B



A B C D E F G H

1 2 3 4 5

【EQUALIZER BOARD】

【REG BOARD】

【IC BOARD】

【POWER BOARD】

【SPEAKER BOARD】

【HEADPHONE

【LED (A) BOARD】

【LED (B) BOARD】

【FUNCTION BOARD】

【SWITCH BOARD】

【CONTROL BOARD】

IC502 STK463

TUNER SECTION

TO CHASSIS

D605 DIAL POINTER

PLL DIAL LAMP

S3 A SPEAKER B

S6 LOUDNESS

S1-1 PHONO — S1-2 TUNER — S1-3 AUX — S1-4 TAPE — FUNCTION

VOLUME — BALANCE — TREBLE — TONE — BASS

| | | |

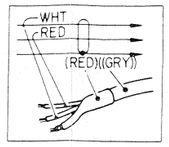
D E F G H I J K

1 2 3 4 5

【REG BOARD】 【IC BOARD】 【POWER BOARD】

IC502 STK463

Note:
- Color code of sleeving over the end of the jacket.



- : B+ pattern
- : signal path
- : L-CH signal path
- : R-CH signal path

【SPEAKER BOARD】 【HEADPHONE BOARD】 【SWITCH BOARD】 【CONTROL BOARD】

S3 A SPEAKER B

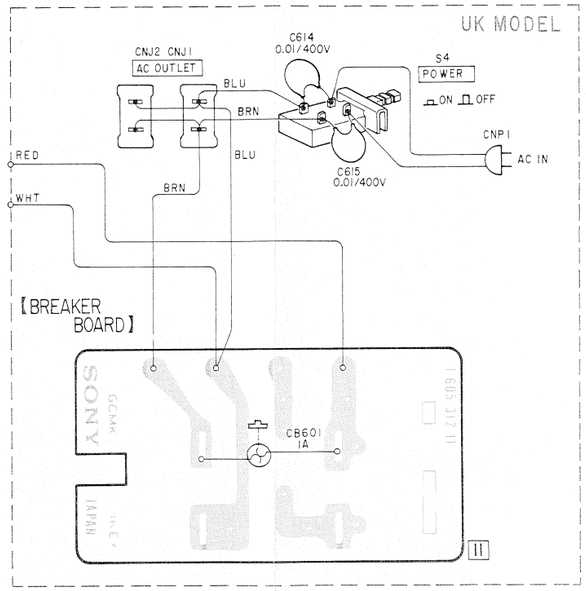
J505 HEAD PHONES

S6 LOUDNESS

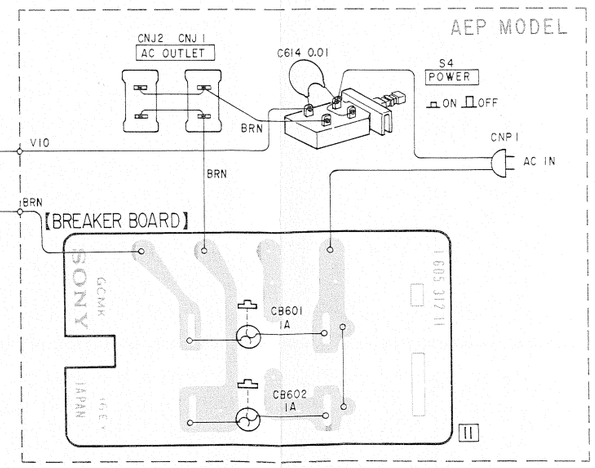
VOLUME BALANCE TREBLE TONE BASS

PT601 POWER

UK MODEL

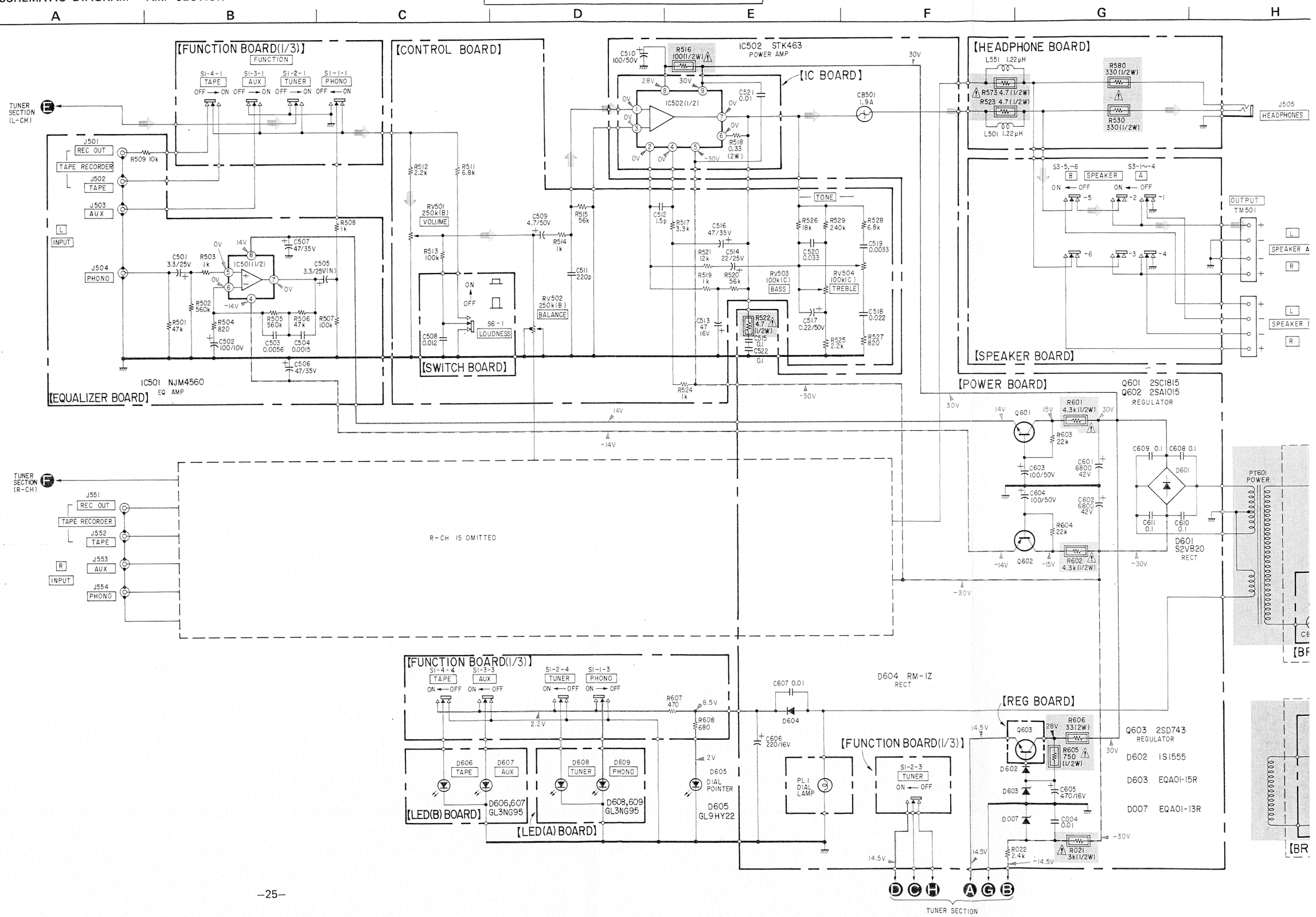


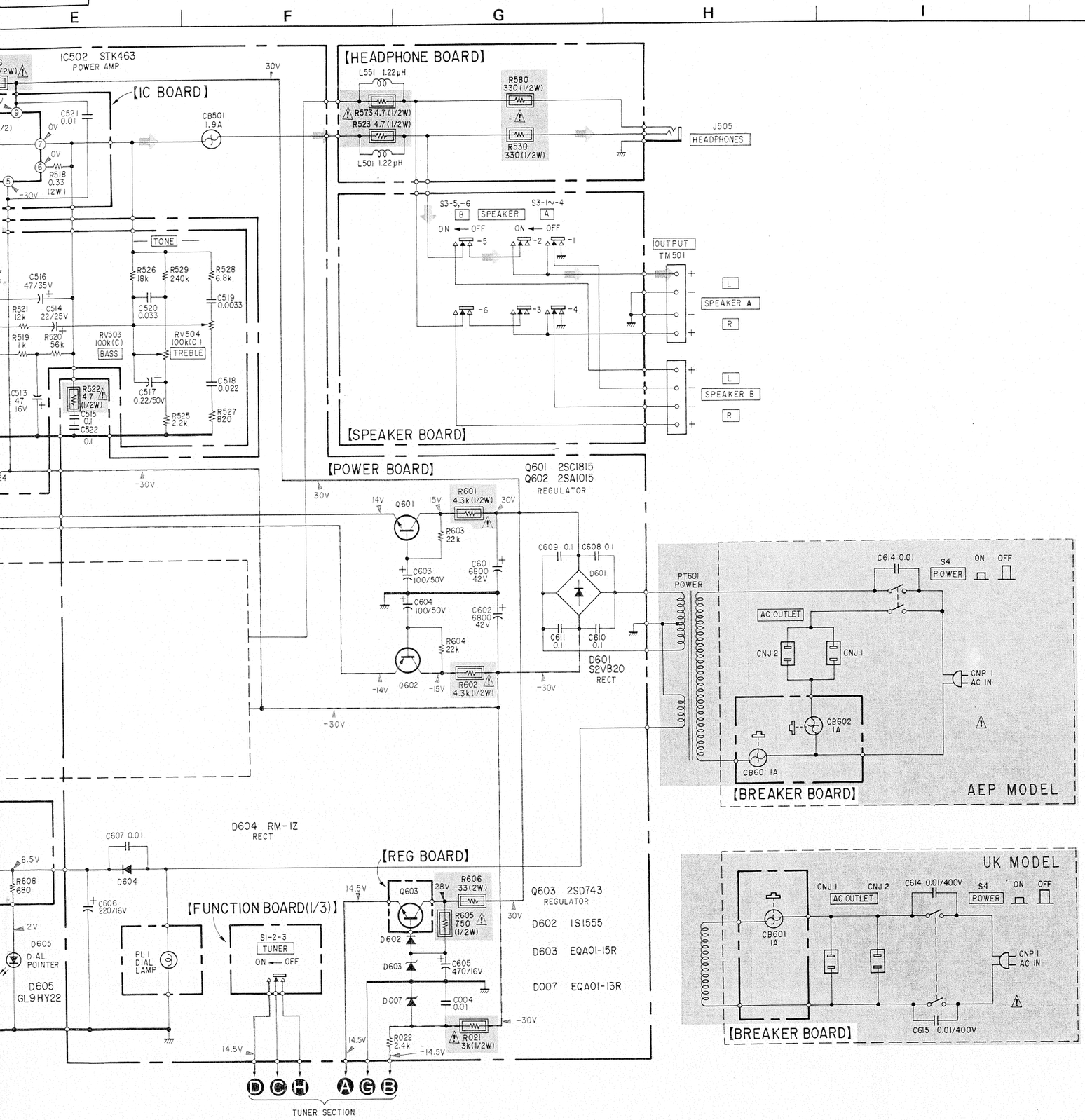
AEP MODEL



Q601 Q602 Q603	Q・IC
IC502	
D603 D602 D604 D605 D601 D007	D

4-4. SCHEMATIC DIAGRAM – AMP SECTION –





• Refer to page 21 for Semiconductor Lead Layouts.

Note:

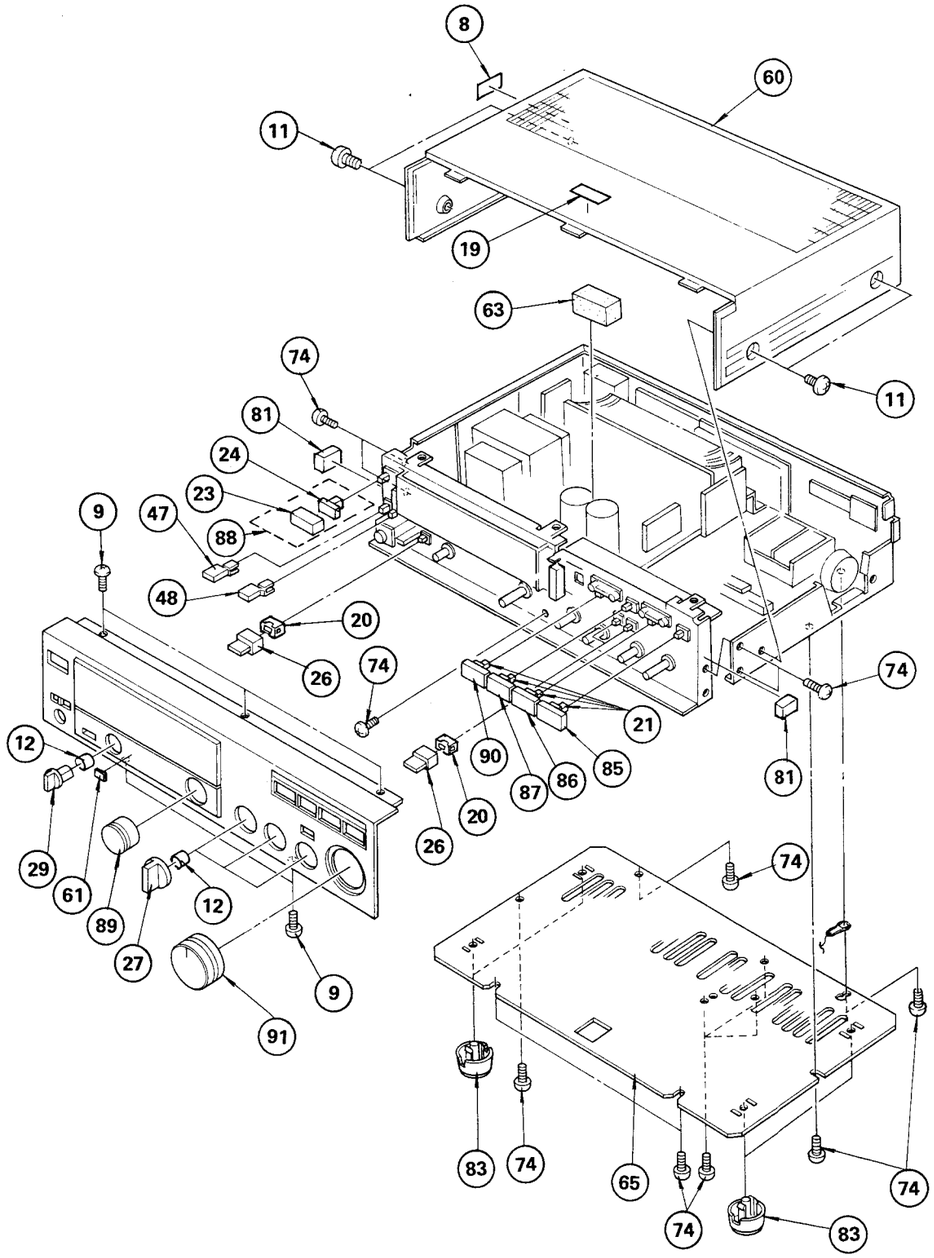
- Components for right channel have same values as for left channel.
- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, ¼ W unless otherwise noted. kΩ : 1000 Ω, MΩ : 1000 kΩ
- : nonflammable resistor.
- : fusible resistor.
- : adjustment for repair.
- : B+ bus.
- : B- bus.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal (detuned) conditions with a VOM (20 kΩ/V).
- Voltage variations may be noted due to normal production tolerances.

• Switch

Ref. No.	Switch	Position
S4-1	PHONO	ON
S4-2	TUNER	OFF
S4-3	AUX	OFF
S4-4	TAPE 1	OFF
S4-5	TAPE 2	OFF
S4-6	TAPE COPY 1→2	OFF
S5	LOUDNESS	OFF
S6	SUBSONIC	OFF
S7	SPEAKERS	A
S8	POWER	OFF

• : signal path

5-1.


8
60
11
19
63
11
74
81
24
23
88
47
9
48
20
26
74
74
21
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90
87
86
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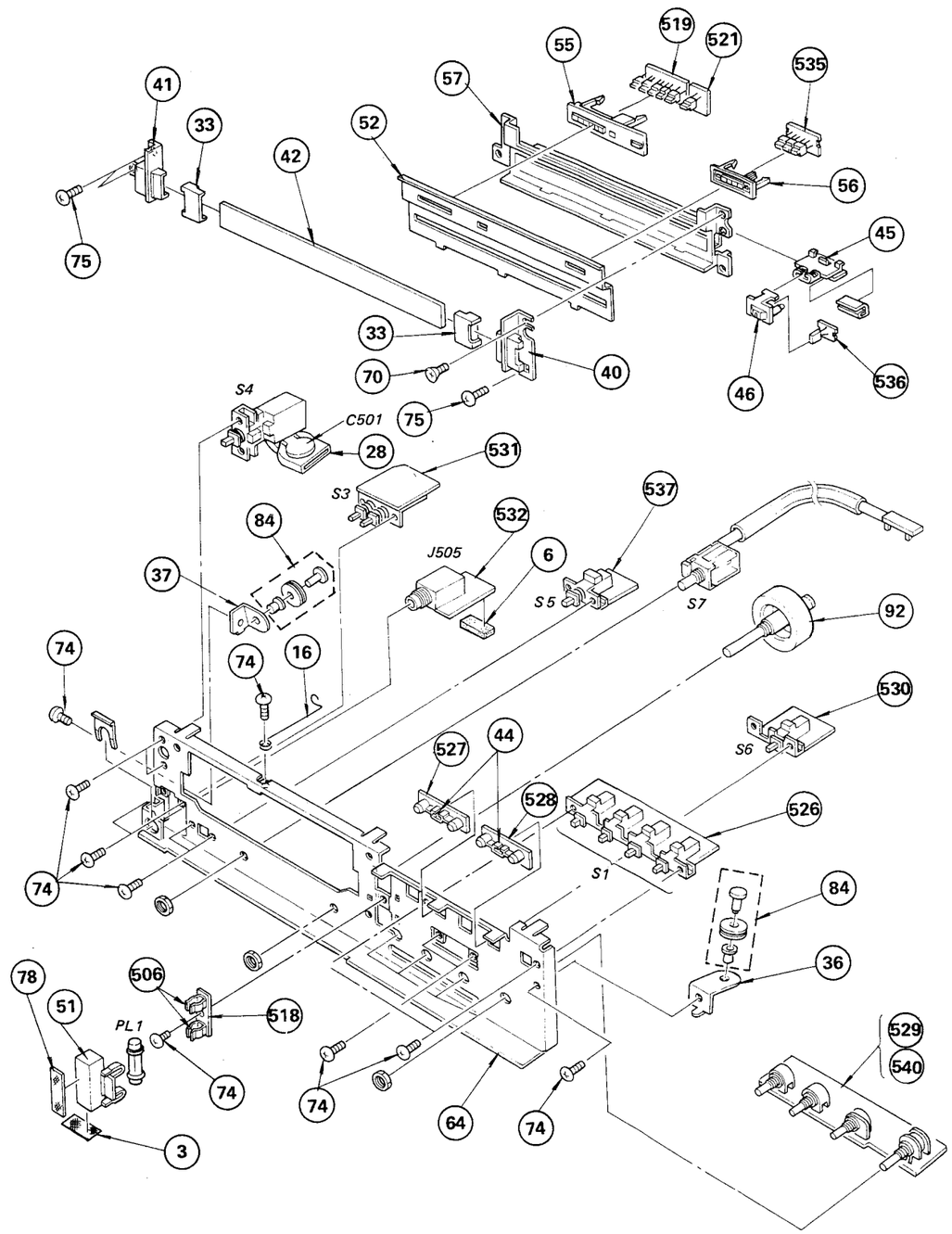
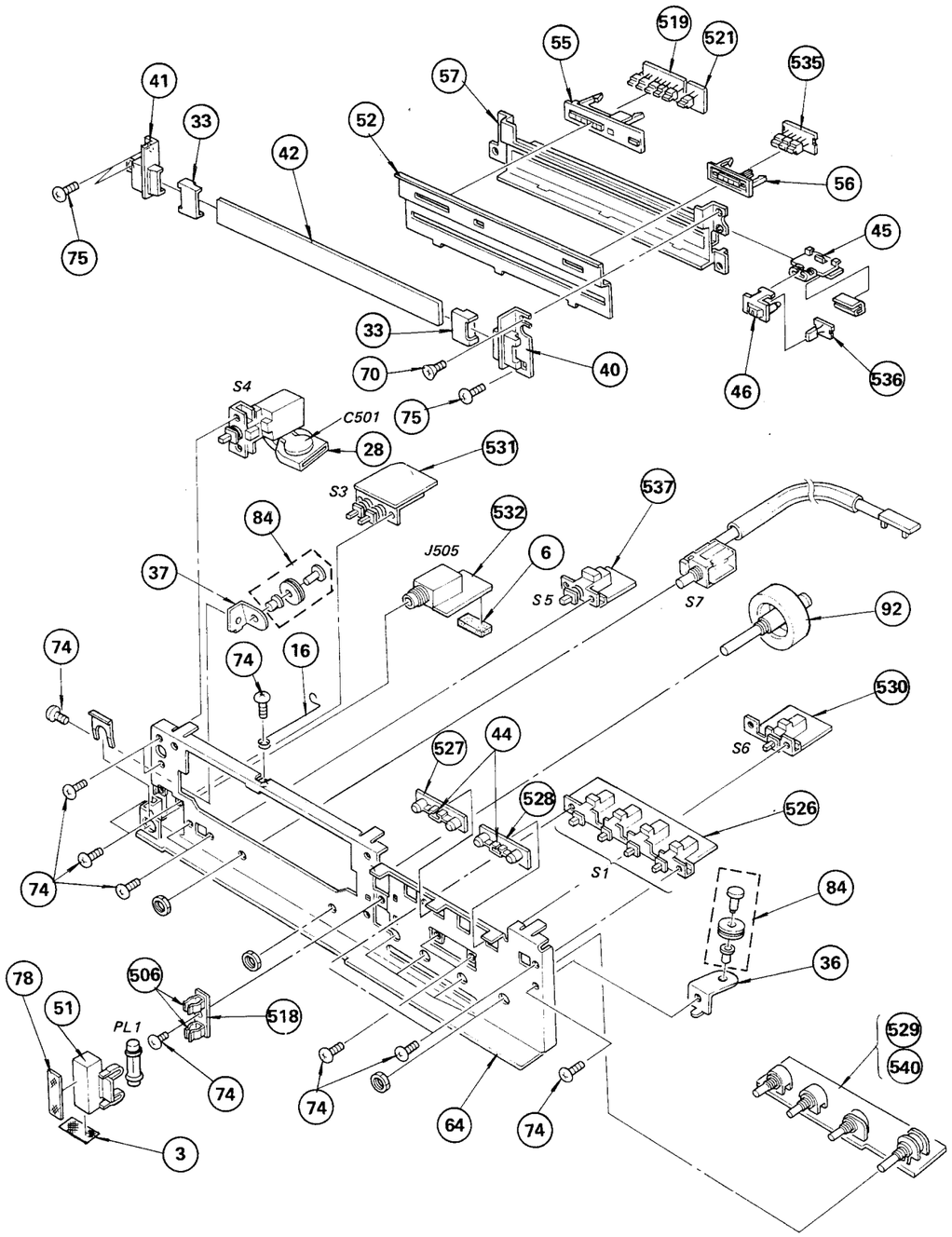
20
74
83
74
65
74
74
83

5-2.


519
521
55
57
535
41
33
52
42
56
75
45
33
40
70
46
536
75
S4
C501
28
531
S3
537
84
532
J505
6
37
S5
S7
74
74
16
92
530
527
44
S6
528
526
74
S1
84
78
506
36
51
518
PL1
529
540
74
74
64
74
3

5-2.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55
519
521
535
56
45
75
33
70
40
46
536
S4
C501
28
531
S3
84
532
J505
6
537
S5
S7
37
92
74
74
16
530
S6
527
44
528
526
S1
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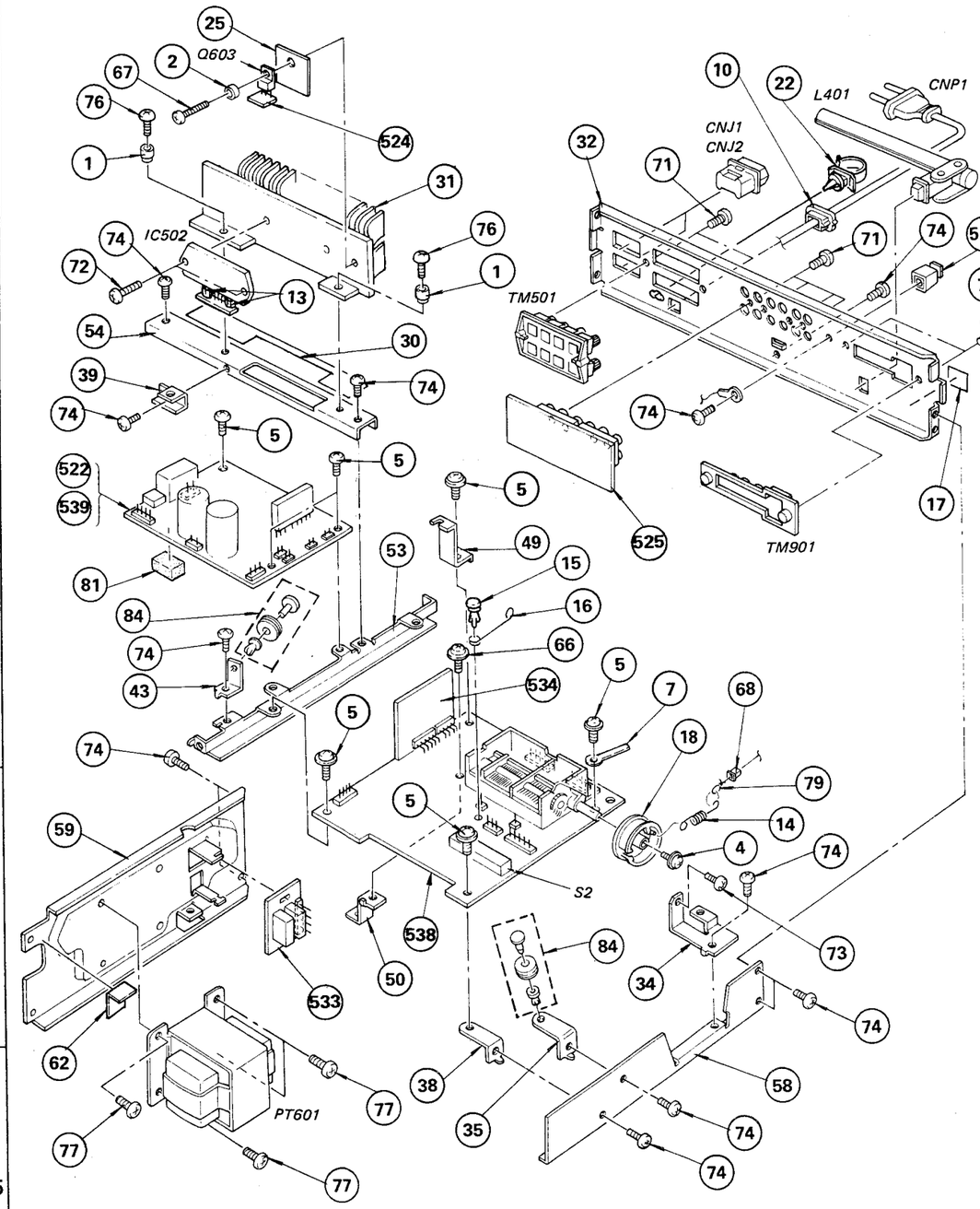
84
36
78
506
518
51
PL1
74
74
74
64
74
529
540
3

5-3.


25
2
Q603
67
76
524
1
31
76
74
IC502
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72
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30
39
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74
5
5
522
539
81
84
74
43
5
5
49
15
16
66
534
53
5
7
68
18
79
14
4
74
73
59
5
74
S2
538
50
533
84
34
74
62
38
35
58
74
74
PT601
77
77
77
10
22
L401
CNP1
CNJ1
CNJ2
32
71
71
74
514
71
TM501
74
17
525
TM901

GENERAL SECTION

No.	Part No.	Description
1	2-832-004-00	BUSHING, INSULATOR
2	2-832-007-00	BUSHING (K), INSULATING
3	3-480-149-00	CUSHION
4	3-701-462-00	SCREW, LOCK
5	3-701-589-00	SCREW, SELF-TAPPING
6	3-884-171-00	STOPPER
7	3-701-822-00	HOLDER, WIRE
8	3-703-079-21	(UK)....LABEL, CAUTION (BACK)
9	3-703-108-01	SCREW +BV 3X6, S TIGHT
10	3-703-244-00	BUSHING, CORD
11	3-703-354-11	SCREW (OS), TOP COVER, CLAW
12	3-703-466-00	SPRING (6600)
13	3-886-569-00	TUBE, RUBBER
14	4-809-050-00	SPRING, TENSION
15	4-812-134-00	RIVET, NYLON, 3.5
16 ♦	4-838-818-00	LEAD, CLAMP INDICATOR
17 ♦	4-844-449-00	LABEL
18	4-859-586-01	DRUM (165), DIAL
19	4-861-045-00	LABEL, CAUTION
20	4-864-307-00	RING
21	4-866-342-00	JOINT (B), KNOB
22	4-869-217-00	CLIP, CORD
23	4-871-322-01	CAP, POWER KNOB
24	4-871-323-00	BASE, POWER KNOB
25	4-874-042-00	SHEET (A), INSULATING
26	4-874-058-41	KNOB, SQUARE (3X14)
27	4-875-152-00	KNOB, CONTROL
28	4-875-455-21	COVER (DIA.20), CAPACITOR
29	4-875-827-01	KNOB, BAND SELECTOR
30 ♦	4-876-701-00	SHEET (B), INSULATING
31 ♦	4-876-703-01	HEAT SINK (SMALL)
32 ♦	4-876-704-21	(AEP)...PLATE, JACK
32 ♦	4-876-704-31	(UK)....PLATE, JACK
33 ♦	4-876-706-00	RETAINER, DIAL SCALE
34 ♦	4-876-707-00	BRACKET, F.E
35 ♦	4-876-708-00	BRACKET (A), PULLEY
36 ♦	4-876-709-00	BRACKET (B), PULLEY
37 ♦	4-876-710-00	BRACKET (C), PULLEY
38 ♦	4-876-711-00	BRACKET (C), PC BOARD
39 ♦	4-876-712-00	BRACKET (B), PC BOARD
40	4-876-713-00	HOLDER (R), DIAL SCALE
41	4-876-714-00	HOLDER (L), DIAL SCALE
42	4-876-715-11	SCALE, DIAL
43 ♦	4-876-716-00	BRACKET (C), PULLEY
44	4-876-717-00	HOLDER (F), LED
45	4-876-718-00	HOLDER, POINTER

GENERAL SECTION

No.	Part No.	Description
46	4-876-719-00	POINTER
47	4-876-722-01	KNOB (4X10), SQUARE
48	4-876-722-11	KNOB (4X10), SQUARE
49 ♦	4-876-723-00	RETAINER, PC BOARD
50 ♦	4-876-724-00	BRACKET (D), PC BOARD
51 ♦	4-876-725-00	HOUSE, LAMP
52	4-876-733-11	PLATE, ORNAMENTAL
53 ♦	4-876-735-00	BRACKET (A), PC BOARD
54 ♦	4-876-736-00	BRACKET, HEAT SINK
55	4-876-741-00	HOLDER (S), LED
56	4-876-743-00	HOLDER (A), LED
57	4-876-745-00	TABLE, POINTER
58 ♦	4-876-746-00	PLATE (R), SIDE
59 ♦	4-876-749-00	PLATE (L), SIDE
60	4-876-750-01	COVER, TOP
61 ♦	4-876-751-00	MARK, A.S.L
62 ♦	4-876-752-00	PLATE, INSULATING
63 ♦	4-876-753-00	CUSHION
64 ♦	4-876-754-11	PANEL, SUB
65 ♦	4-876-755-01	PLATE, BOTTOM
66	4-893-523-11	SCREW 3X8
67	7-621-259-55	SCREW +P 2.6X8
68	7-623-616-01	EYELET, 2X3
69	.....	
70	7-685-246-24	SCREW +KTP 3X8 TYPE2 SLIT
71	7-685-646-11	SCREW +BVTP 3X8 TYPE2 N-S
72	7-685-650-21	SCREW +BVTP 3X16 TYPE2 SLIT
73	7-685-870-01	SCREW +BVTT 3X5 (S)
74	7-685-871-01	SCREW +BVTT 3X6 (S)
75	7-685-872-01	SCREW +BVTT 3X8 (S)
76	7-685-873-01	SCREW +BVTT 3X10 (S)
77	7-685-880-01	SCREW +BVTT 4X6 (S)
78	9-911-815-01	CUSHION (H)
79	9-911-825-42	STRING, 0.5MM WHITE
80	.....	
81	9-911-843-XX	CUSHION
82	A-4322-357-A	PANEL ASSY
83	X-4864-303-0	FOOT ASSY
84	X-4864-705-0	PULLEY ASSY
85	X-4875-101-0	KNOB ASSY, PHONO
86	X-4875-102-0	KNOB ASSY, TUNER
87	X-4875-103-0	KNOB ASSY, AUX
88	X-4875-108-0	KNOB ASSY, POWER
89	X-4875-113-2	KNOB (DIA. 24) (A) ASSY, R
90	X-4876-701-0	KNOB ASSY, TAPE
91	X-4876-702-0	KNOB (DIA.40) ASSY, R
92 ♦	X-4876-703-0	WHEEL ASSY, TUNING

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CAPACITORS:
- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

RESISTORS
- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.
- F : nonflammable

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

COILS
- MMH : mH, UH : μH

ACCESSORY & PACKING MATERIAL

No.	Part No.	Description
101	1-501-184-00	ANTENNA, FEEDER
102	3-701-360-00	LABEL, TACK
103	3-701-630-00	BAG, POLYETHYLENE
104	3-783-626-11	MANUAL, INSTRUCTION
105	3-795-193-11	(AEP)...INSTRUCTION, DUTCH/SWEDISH
106	4-864-354-00	SHEET, POLYETHYLENE
107	4-876-758-00	INDIVIDUAL CARTON
108	4-876-765-00	CUSHION (LEFT), LOWER
109	4-876-766-00	CUSHION (RIGHT), LOWER
110	4-876-767-00	CUSHION (UPPER)

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
501	⚠ 1-161-744-00	CAP, CERAMIC 0.01 400V			
502 ♦	1-508-809-00	BASE POST (14MM) 2P			
503 ♦	1-508-810-00	14MM BASE POST			
504 ♦	1-508-831-12	H TYPE BASE POST			
505 ♦	1-508-832-12	H TYPE BASE POST			
506	1-533-051-XX	HOLDER,CYLINDRICAL LAMP			
507 ♦	1-535-114-00	TERMINAL			
508 ♦	1-535-115-00	TERMINAL			
509 ♦	1-535-116-00	TERMINAL			
510 ♦	1-535-117-00	TERMINAL			
511 ♦	1-535-118-00	TERMINAL			
512 ♦	1-535-119-00	TERMINAL			
513 ♦	1-535-120-00	TERMINAL			
514	1-535-132-00	TERMINAL			
515 ♦	1-535-141-00	BASE POST 19MM (10MM PITCH) 4P			
516 ♦	1-535-149-11	WIRE (30.0MM)			
517 ♦	1-560-060-00	PIN, CONNECTOR 2P			
518 ♦	1-605-176-00	PC BOARD, LAMP			
519 ♦	1-605-177-00	PC BOARD, SIGNAL (A)			
520	.....				
521 ♦	1-605-179-00	PC BOARD, SIGNAL (B)			
522 ♦	1-605-301-00	PC BOARD, POWER			
523 ♦	1-605-302-00	PC BOARD, IC			
524 ♦	1-605-303-00	PC BOARD, REG			
525 ♦	1-605-304-00	PC BOARD, EQUALIZER			
526 ♦	1-605-305-00	PC BOARD, FUNCTION			
527 ♦	1-605-306-00	PC BOARD, LED (A)			
528 ♦	1-605-307-00	PC BOARD, LED (B)			
529 ♦	1-605-308-00	PC BOARD, CONTROL			
530 ♦	1-605-309-00	PC BOARD, SWITCH			
531 ♦	1-605-310-00	PC BOARD, SPEAKER			
532 ♦	1-605-311-00	PC BOARD, HEADPHONE			
533 ♦	1-605-312-00	PC BOARD, BREAKER			
534 ♦	1-605-313-00	PC BOARD, ASL			
535 ♦	1-605-314-00	PC BOARD, ASL LED			
536 ♦	1-605-315-00	PC BOARD, POINTER			
537 ♦	1-605-450-00	PC BOARD, FUNCTION (A)			
538 ♦	A-4351-260-A	MOUNTED PCB, TUNER			
539 ♦	A-4409-492-A	(AEP)....MOUNTED PCB, POWER			
539 ♦	A-4409-493-A	(UK).....MOUNTED PCB, POWER			
540 ♦	A-4409-495-A	MOUNTED PCB, CONTROL			
C002	1-123-316-00	ELECT	10MF	20%	16V
C003	1-123-317-00	ELECT	22MF	20%	16V
C101	1-161-017-00	MELF	0.022MF	30%	25V
C102	1-102-514-00	MELF	22MF	5%	50V
C103	1-102-116-00	MELF	680PF	10%	50V
C104	1-123-352-00	ELECT	1MF	20%	50V
C105	1-161-017-00	MELF	0.022MF	30%	25V
C106	1-161-017-00	MELF	0.022MF	30%	25V
C107	1-161-017-00	MELF	0.022MF	30%	25V
C109	1-161-017-00	MELF	0.022MF	30%	25V

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COILS
- MMH : mH, UH : μH

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C110	1-161-017-00	MELF	0.022MF	30%	25V
C111	1-161-017-00	MELF	0.022MF	30%	25V
C112	1-102-518-00	MELF	33PF	5%	50V
C113	1-123-316-00	ELECT	10MF	20%	16V
C114	1-161-017-00	MELF	0.022MF	30%	25V
C117	1-161-017-00	MELF	0.022MF	30%	25V
C119	1-161-017-00	MELF	0.022MF	30%	25V
C120	1-161-017-00	MELF	0.022MF	30%	25V
C121	1-161-017-00	MELF	0.022MF	30%	25V
C122	1-161-017-00	MELF	0.022MF	30%	25V
C123	1-123-352-00	ELECT	1MF	20%	50V
C125	1-123-354-00	ELECT	3.3MF	20%	50V
C128	1-123-353-00	ELECT	2.2MF	20%	50V
C202	1-123-352-00	ELECT	1MF	20%	50V
C203	1-123-316-00	ELECT	10MF	20%	16V
C204	1-123-316-00	ELECT	10MF	20%	16V
C207	1-161-013-00	MELF	0.01MF	30%	25V
C208	1-161-013-00	MELF	0.01MF	30%	25V
C209	1-123-351-00	ELECT	0.47MF	20%	50V
C210	1-123-351-00	ELECT	0.47MF	20%	50V
C211	1-123-351-00	ELECT	0.47MF	20%	50V
C212	1-123-351-00	ELECT	0.47MF	20%	50V
C215	1-123-352-00	ELECT	1MF	20%	50V
C216	1-123-352-00	ELECT	1MF	20%	50V
C218	1-123-353-00	ELECT	2.2MF	20%	50V
C219	1-123-354-00	ELECT	3.3MF	20%	50V
C222	1-123-512-00	ELECT	47MF	20%	50V
C301	1-102-074-00	MELF	0.001MF	10%	50V
C302	1-161-017-00	MELF	0.022MF	30%	25V
C303	1-161-017-00	MELF	0.022MF	30%	25V
C304	1-161-017-00	MELF	0.022MF	30%	25V
C305	1-123-316-00	ELECT	10MF	20%	16V
C306	1-161-017-00	MELF	0.022MF	30%	25V
C307	1-161-043-00	MELF	0.0022MF	20%	50V
C308	1-161-017-00	MELF	0.022MF	30%	25V
C309	1-102-074-00	MELF	0.001MF	10%	50V
C312	1-161-017-00	MELF	0.022MF	30%	25V
C314	1-123-352-00	ELECT	1MF	20%	50V
C315	1-123-354-00	ELECT	3.3MF	20%	50V
C316	1-161-017-00	MELF	0.022MF	30%	25V
C318	1-123-316-00	ELECT	10MF	20%	16V
C321	1-102-880-00	CERAMIC	15PF	5%	50V
C323	1-103-706-00	POLYSTYRENE	160PF	5%	50V
C324	1-102-731-00	CERAMIC	62PF	5%	50V
C501	1-123-382-00	ELECT	3.3MF	20%	25V
C503	1-108-573-00	MYLAR	0.0056MF	5%	50V
C504	1-108-559-00	MYLAR	0.0015MF	5%	50V
C505	1-123-382-00	ELECT	3.3MF	20%	25V
C509	1-123-355-00	ELECT	4.7MF	20%	50V
C511	1-102-110-00	MELF	220PF	10%	50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C512	1-101-576-00	MELF	1.5PF	20%	50V
C517	1-131-404-00	ELECT(SOLID)	0.22MF	20%	16V
C551	1-123-382-00	ELECT	3.3MF	20%	25V
C553	1-108-573-00	MYLAR	0.0056MF	5%	50V
C554	1-108-559-00	MYLAR	0.0015MF	5%	50V
C555	1-123-382-00	ELECT	3.3MF	20%	25V
C559	1-123-355-00	ELECT	4.7MF	20%	50V
C561	1-102-110-00	MELF	220PF	10%	50V
C562	1-101-576-00	MELF	1.5PF	20%	50V
C567	1-131-404-00	ELECT(SOLID)	0.22MF	20%	16V
C601	1-125-157-00	ELECT(BLOCK)	6800MF	20%	42V
C602	1-125-157-00	ELECT(BLOCK)	6800MF	20%	42V
CB501	1-532-566-00	BREAKER, CIRCUIT			
CB551	1-532-566-00	BREAKER, CIRCUIT			
CB601	1-532-535-00	CIRCUIT BREAKER			
CB602	1-532-535-00	CIRCUIT BREAKER			
CF101	1-527-534-XX	FILTER, SOLID STATE			
CF301	1-527-599-00	FILTER, MECHANICAL			
CNP1	⚠1-551-884-00	(UK)....CORD, POWER			
CNP1	⚠1-534-817-XX	(AEP)...CORD, POWER, EURO PLUG			
CNJ1	⚠1-526-636-00	(UK)....OUTLET, AC			
CNJ1	⚠1-526-694-00	(AEP)...OUTLET, AC			
CNJ2	⚠1-526-636-00	(UK)....OUTLET, AC			
CNJ2	⚠1-526-694-00	(AEP)...OUTLET, AC			
CT301	1-141-179-12	CAP, TRIMMER			
CT302	1-141-179-12	CAP, TRIMMER			
CT303	1-141-171-00	CAP, TRIMMER			
CT304	1-141-171-00	CAP, TRIMMER			
D002	8-719-815-55	DIODE 1S1555			
D003	8-719-815-55	DIODE 1S1555			
D004	8-719-901-52	DIODE SLP151B			
D005	8-719-901-52	DIODE SLP151B			
D006	8-719-902-51	DIODE SLP251B			
D007	8-719-936-13	DIODE EQA01-13R			
D101	8-719-925-26	DIODE (LED BLOCK)	SLP-252B		
D102	8-719-422-21	DIODE 1T22AM			
D104	8-719-815-55	DIODE 1S1555			
D201	8-719-900-41	DIODE SLP141B			
D202	8-719-815-55	DIODE 1S1555			
D203	8-719-815-55	DIODE 1S1555			
D204	8-719-815-55	DIODE 1S1555			
D205	8-719-815-55	DIODE 1S1555			
D206	8-719-815-55	DIODE 1S1555			
D301	8-719-815-55	DIODE 1S1555			
D302	8-719-815-55	DIODE 1S1555			
D303	8-719-815-55	DIODE 1S1555			
D601	8-719-502-20	DIODE S2VB20			
D602	8-719-815-55	DIODE 1S1555			

ELECTRICAL PARTS

Ref.No.	Part No.	Description
D603	8-719-936-15	DIODE EQA01-15R
D604	8-719-200-02	DIODE 10E-2
D605	8-719-919-24	DIODE GL-9HY22
D606	8-719-930-95	DIODE GL-3NG95
D607	8-719-930-95	DIODE GL-3NG95
D608	8-719-930-95	DIODE GL-3NG95
D609	8-719-930-95	DIODE GL-3NG95
FE101	1-463-368-00	FRONT END
IC001	8-759-145-58	IC UPC4558C
IC101	8-759-812-35	IC LA1235
IC102	8-759-904-89	IC TL489CP
IC201	8-759-833-90	IC LA3390
IC301	8-759-812-45	IC LA1245
IC501	8-759-745-60	IC NJM4560D-X
IC502	8-759-846-30	IC STK-463
J501	1-507-629-11	JACK, PIN 4P
J502	1-507-629-11	JACK, PIN 4P
J503	1-507-728-00	JACK, PIN 4P
J504	1-507-728-00	JACK, PIN 4P
J505	1-507-669-00	JACK
J551	1-507-629-11	JACK, PIN 4P
J552	1-507-629-11	JACK, PIN 4P
J553	1-507-728-00	JACK, PIN 4P
J554	1-507-728-00	JACK, PIN 4P
L301	1-407-173-XX	MICRO INDUCTOR 220UH
L302	1-405-953-00	COIL (OSC)
L303	1-405-954-00	COIL (OSC)
L401	1-401-913-00	ANTENNA, FERRITE-ROD (LW/MW)
L501	♦1-420-872-00	COIL, AIRE CORE
L551	♦1-420-872-00	COIL, AIRE CORE
PL1	1-518-070-41	LAMP
PT601	⚠1-447-011-00	(UK)....TRANSFORMER, POWER
PT601	⚠1-447-010-00	(AEP)...TRANSFORMER, POWER
Q001	8-729-663-47	TRANSISTOR 2SC1364
Q002	8-729-663-47	TRANSISTOR 2SC1364
Q003	8-729-663-47	TRANSISTOR 2SC1364
Q004	8-729-663-47	TRANSISTOR 2SC1364
Q005	8-729-663-47	TRANSISTOR 2SC1364
Q006	8-729-663-47	TRANSISTOR 2SC1364
Q007	8-729-201-52	TRANSISTOR 2SA1015-Y
Q008	8-729-201-52	TRANSISTOR 2SA1015-Y
Q009	8-729-201-52	TRANSISTOR 2SA1015-Y
Q101	8-729-883-92	TRANSISTOR 2SC2839-D
Q201	8-729-663-47	TRANSISTOR 2SC1364
Q202	8-729-663-47	TRANSISTOR 2SC1364
Q203	8-729-663-47	TRANSISTOR 2SC1364
Q204	8-729-201-52	TRANSISTOR 2SA1015-Y
Q601	8-729-663-47	TRANSISTOR 2SC1364

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
Q602	8-729-201-52	TRANSISTOR 2SA1015			
Q603	8-729-174-33	TRANSISTOR 2SD743-Q			
R021	1-247-251-00	CARBON	3K	5%	1/2W F
R105	1-247-109-00	CARBON	120	5%	1/4W F
R114	1-247-109-00	CARBON	120	5%	1/4W F
R126	1-247-083-00	CARBON	10	5%	1/4W F
R201	1-247-109-00	CARBON	120	5%	1/4W F
R302	1-247-115-00	CARBON	220	5%	1/4W F
R308	1-247-109-00	CARBON	120	5%	1/4W F
R516	1-212-982-00	FUSIBLE	100	5%	1/2W F
R518	1-217-152-11	RES, METAL PLATE	0.33		
R522	1-247-188-00	CARBON	4.7	5%	1/2W F
R523	1-247-188-00	CARBON	4.7	5%	1/2W F
R530	1-247-228-00	CARBON	330	5%	1/2W F
R568	1-217-152-11	RES, METAL PLATE	0.33		
R572	1-247-188-00	CARBON	4.7	5%	1/2W F
R573	1-247-188-00	CARBON	4.7	5%	1/2W F
R580	1-247-228-00	CARBON	330	5%	1/2W F
R601	1-247-255-00	CARBON	4.3K	5%	1/2W F
R602	1-247-255-00	CARBON	4.3K	5%	1/2W F
R605	1-247-237-00	CARBON	750	5%	1/2W F
R606	1-206-475-00	METAL	33	5%	2W F
RT101	1-226-237-00	RES, ADJ, CARBON	20K		
RT201	1-226-237-00	RES, ADJ, CARBON	20K		
RT202	1-226-236-00	RES, ADJ, CARBON	10K		
RV501	1-228-272-00	RES, VAR, CARBON	250K/250K		
RV502	1-228-273-00	RES, VAR, CARBON	250K/250K		
RV503	1-228-274-00	RES, VAR, CARBON	100K/100K		
RV504	1-228-274-00	RES, VAR, CARBON	100K/100K		
RV551	1-228-272-00	RES, VAR, CARBON	250K/250K		
RV553	1-228-274-00	RES, VAR, CARBON	100K/100K		
RV554	1-228-274-00	RES, VAR, CARBON	100K/100K		
S1	1-553-759-00	SWITCH, PUSH (4 KEY)			
S2	1-553-763-00	SWITCH, SLIDE (REMOTE TYPE)			
S3	1-553-761-00	SWITCH, PUSH (2 KEY)			
S4	⚠1-553-447-00	SWITCH, PUSH (AC POWER)			
S5	1-553-764-00	SWITCH, SLIDE (1 KEY)			
S6	1-553-760-00	SWITCH, PUSH (1 KEY)			
S7	4-875-818-00	SWITCH, BAND SELECTION			
T101	1-404-170-00	TRANSFORMER, IF			
T301	1-409-348-00	COIL, MECHANICAL FILTER			
TM501	1-536-662-00	TERMINAL BOARD (SPEAKER)			
TM901	1-536-663-00	TERMINAL BOARD (ANTENNA)			

NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked " ♦ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:
- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

RESISTORS
- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.
- F : nonflammable

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

COILS
- MMH : mH, UH : μH

NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked " ♦ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:
- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

RESISTORS
- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.
- F : nonflammable

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

COILS
- MMH : mH, UH : μH

ELECTROLYTIC CAPACITORS

RATING → : Use the high voltage rated one.

CAP. (μF)	6.3 VOLT. PART No.	10 VOLT. PART No.	16 VOLT. PART No.	25 VOLT. PART No.	35 VOLT. PART No.	50 VOLT. PART No.
0.47					→	1-121-726-00
1.0					→	1-121-391-00
2.2					→	1-121-450-00
3.3	→	→	→	1-121-392-00	→	1-121-393-00
4.7	→	→	→	1-121-395-00	→	1-121-396-00
10	→	→	1-121-651-00	1-121-398-00	→	1-121-738-00
22	→	→	1-121-479-00	1-121-480-00	1-121-662-00	1-121-152-00
33	→	→	1-121-403-00	1-121-404-00	1-121-652-00	1-121-405-00
47	→	1-121-352-00	1-121-409-00	1-121-410-00	1-121-653-00	1-121-411-00
100	→	1-121-414-00	1-121-415-00	1-121-416-00	1-121-357-00	1-121-417-00
220	1-121-417-00	1-121-420-00	1-121-421-00	1-121-422-00	1-121-261-00	1-121-423-00
330	1-121-751-00	1-121-805-00	1-121-521-00	1-121-654-00	1-121-655-00	1-121-656-00
470	1-121-424-00	1-121-425-00	1-121-426-00	1-121-733-00	1-121-361-00	1-121-810-00
1000	–	1-121-736-00	1-121-245-00	1-121-657-00	1-121-388-00	1-123-061-00
2200	1-121-658-00	1-121-659-00	1-121-660-00	1-123-067-00	1-121-984-00	–
3300	1-121-661-00	1-123-075-00	1-123-071-00	–	–	–

CAP. (μF)	100 VOLT. PART No.	160 VOLT. PART No.	250 VOLT. PART No.	350 VOLT. PART No.
0.47	–	–	–	–
1.0	1-123-249-00	1-123-252-00	1-123-003-00	1-121-168-00
2.2	1-123-250-00	1-123-026-00	–	1-123-028-00
3.3	1-121-995-00	–	1-123-004-00	1-123-006-00
4.7	1-123-255-00	1-121-246-00	1-121-759-00	1-123-007-00
10	1-121-126-00	1-121-999-00	1-123-254-00	1-123-008-00
22	1-121-996-00	1-123-253-00	1-123-005-00	1-123-022-00
33	1-121-997-00	1-121-757-00	–	–
47	1-123-251-00	1-121-919-00	–	–
100	1-123-084-00	–	–	–

CERAMIC CAPACITORS

RATING

CAP. (pF)	50 VOLT. PART No.	CAP. (pF)	50 VOLT. PART No.	CAP. (pF)	50 VOLT. PART No.	CAP. (μF)	50 VOLT. PART No.
0.5	1-101-837-00	22	1-102-959-00	150	1-101-361-00	0.001	1-102-074-00
0.75	1-101-586-00	24	1-102-960-00	160	1-101-367-00	0.0012	1-102-118-00
1.0	1-102-934-00	27	1-102-961-00	180	1-102-976-00	0.0015	1-102-119-00
1.5	1-101-576-00	30	1-102-962-00	200	1-102-977-00	0.0018	1-102-120-00
2.0	1-102-935-00	33	1-102-963-00	220	1-102-978-00	0.0022	1-102-121-00
3	1-102-936-00	36	1-102-964-00	240	1-102-979-00	0.0027	1-102-122-00
4	1-102-937-00	39	1-102-965-00	270	1-102-980-00	0.0033	1-102-123-00
5	1-102-942-00	43	1-102-966-00	300	1-102-981-00	0.0039	1-102-124-00
6	1-102-943-00	47	1-101-880-00	330	1-102-820-00	0.0047	1-102-125-00
7	1-102-944-00	51	1-101-882-00	360	1-102-821-00	0.0056	1-102-126-00
8	1-102-945-00	56	1-101-884-00	390	1-102-822-00	0.0068	1-102-127-00
9	1-102-946-00	62	1-101-886-00	430	1-102-823-00	0.0082	1-102-128-00
10	1-102-947-00	68	1-101-888-00	470	1-102-824-00	0.01	1-102-129-00
11	1-102-948-00	75	1-101-890-00	510	1-101-059-00	0.022	1-101-005-00
12	1-102-949-00	82	1-102-971-00	560	1-102-115-00	0.047	1-101-006-00
13	1-102-950-00	91	1-102-972-00	680	1-102-116-00		
15	1-102-951-00	100	1-102-973-00	820	1-102-117-00		
16	1-102-952-00	110	1-102-815-00				
18	1-102-953-00	120	1-102-816-00				
20	1-102-958-00	130	1-101-081-00				

0.001μF = 1,000pF

CERAMIC (SEMICONDUCTOR) CAPACITORS

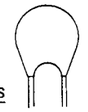
RATING → : Use the high voltage rated one.

CAP. (μF)	25 VOLT. PART No.	50 VOLT. PART No.	CAP. (μF)	25 VOLT. PART No.	50 VOLT. PART No.
0.001	→	1-161-039-00	0.018	1-161-016-00	1-161-054-00
0.0012	→	1-161-040-00	0.022	1-161-017-00	1-161-055-00
0.0015		1-161-041-00	0.027	1-161-018-00	1-161-056-00
0.0018		1-161-042-00	0.033	1-161-019-00	1-161-057-00
0.0022		1-161-043-00	0.039	1-161-010-00	1-161-058-00
0.0027	→	1-161-044-00	0.047	1-161-021-00	1-161-059-00
0.0033	→	1-161-045-00	0.056	→	1-161-060-00
0.0039	→	1-161-046-00	0.068	→	1-161-061-00
0.0047	→	1-161-047-00	0.082	1-161-024-00	1-161-062-00
0.0056	→	1-161-048-00	0.1	1-161-025-00	1-161-063-00
0.0068	→	1-161-049-00			
0.0082	1-161-012-00	1-161-050-00			
0.01	1-161-013-00	1-161-051-00			
0.012	→	1-161-052-00			
0.015	1-161-015-00	1-161-053-00			

MYLAR CAPACITORS

RATING

CAP. (μF)	50 VOLT. PART No.	100 VOLT. PART No.	200 VOLT. PART No.	CAP. (μF)	50 VOLT. PART No.	100 VOLT. PART No.	200 VOLT. PART No.	CAP. (μF)	50 VOLT. PART No.	100 VOLT. PART No.	200 VOLT. PART No.
0.001	1-108-227-00	1-108-365-00	1-108-409-00	0.01	1-108-239-00	1-108-377-00	1-108-421-00	0.1	1-108-251-00	1-108-389-00	1-108-433-00
0.0012	1-108-351-00	1-108-366-00	1-108-410-00	0.012	1-108-357-00	1-108-378-00	1-108-422-00	0.12	1-108-363-00	1-108-390-00	1-108-434-00
0.0015	1-108-228-00	1-108-367-00	1-108-411-00	0.015	1-108-240-00	1-108-379-00	1-108-423-00	0.15	1-108-252-00	1-108-391-00	1-108-435-00
0.0018	1-108-352-00	1-108-368-00	1-108-412-00	0.018	1-108-358-00	1-108-380-00	1-108-424-00	0.18	1-108-364-00	1-108-392-00	1-108-436-00
0.0022	1-108-230-00	1-108-369-00	1-108-413-00	0.022	1-108-242-00	1-108-381-00	1-108-425-00	0.22	1-108-254-00	1-108-393-00	1-108-437-00
0.0027	1-108-353-00	1-108-370-00	1-108-414-00	0.027	1-108-359-00	1-108-382-00	1-108-426-00	0.27	1-108-854-00	–	–
0.0033	1-108-232-00	1-108-371-00	1-108-415-00	0.033	1-108-244-00	1-108-383-00	1-108-427-00	0.33	1-108-855-00	–	–
0.0039	1-108-354-00	1-108-372-00	1-108-416-00	0.039	1-108-360-00	1-108-384-00	1-108-428-00	0.39	1-108-856-00	–	–
0.0047	1-108-234-00	1-108-373-00	1-108-417-00	0.047	1-108-246-00	1-108-385-00	1-108-429-00	0.47	1-108-857-00	–	–
0.0056	1-108-355-00	1-108-374-00	1-108-418-00	0.056	1-108-361-00	1-108-386-00	1-108-430-00				
0.0068	1-108-237-00	1-108-375-00	1-108-419-00	0.068	1-108-249-00	1-108-387-00	1-108-431-00				
0.0082	1-108-356-00	1-108-376-00	1-108-420-00	0.082	1-108-362-00	1-108-388-00	1-108-432-00				

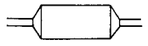


TANTALUM CAPACITORS

RATING → : Use the high voltage rated one.

CAP. (μF)	3.15 VOLT. PART No.	6.3 VOLT. PART No.	10 VOLT. PART No.	16 VOLT. PART No.	20 VOLT. PART No.	25 VOLT. PART No.	35 VOLT. PART No.
0.01					→	→	1-131-396-00
0.015						→	1-131-397-00
0.022						→	1-131-398-00
0.033						→	1-131-399-00
0.047						→	1-131-400-00
0.068					→	→	1-131-401-00
0.1					→	→	1-131-402-00
0.15					→	→	1-131-403-00
0.22					→	→	1-131-404-00
0.33					→	1-131-409-00	1-131-405-00
0.47	–	–	–	–	1-131-412-00	→	1-131-406-00
0.68	–	–	–	1-131-415-00	→	1-131-410-00	1-131-407-00
1.0	–	–	1-131-418-00	–	1-131-413-00	→	1-131-408-00
1.5	–	1-131-421-00	–	1-131-416-00	→	1-131-411-00	1-131-348-00
2.2	1-131-424-00	–	1-131-419-00	–	1-131-414-00	1-131-355-00	1-131-349-00
3.3	–	1-131-422-00	–	1-131-417-00	1-131-362-00	1-131-356-00	1-131-350-00
4.7	1-131-425-00	–	1-131-420-00	1-131-369-00	1-131-363-00	1-131-357-00	1-131-351-00
6.8	–	1-131-423-00	1-131-376-00	1-131-370-00	1-131-364-00	1-131-358-00	1-131-352-00
10	1-131-426-00	1-131-383-00	1-131-377-00	1-131-371-00	1-131-365-00	1-131-359-00	1-131-353-00
15	1-131-390-00	1-131-384-00	1-131-378-00	1-131-372-00	1-131-366-00	1-131-360-00	–
22	1-131-391-00	1-131-385-00	1-131-379-00	1-131-373-00	1-131-367-00		
33	1-131-392-00	1-131-386-00	1-131-380-00	1-131-374-00			
47	1-131-393-00	1-131-387-00	1-131-381-00	–			
68	1-131-394-00	1-131-388-00	–	–			
100	1-131-395-00	–	–	–			

TANTALUM CAPACITORS



RATING

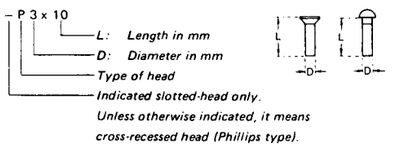
CAP. (μF)	3 VOLT. PART No.	6.3 VOLT. PART No.	10 VOLT. PART No.	16 VOLT. PART No.	20 VOLT. PART No.	35 VOLT. PART No.
0.033						1-131-273-00
0.047						1-131-274-00
0.068						1-131-275-00
0.1						1-131-276-00
0.15						1-131-277-00
0.22			–	–	1-131-262-00	1-131-278-00
0.33			–	–	1-131-263-00	1-131-279-00
0.47			1-131-169-00	–	1-131-264-00	1-131-280-00
0.68			–	1-131-258-00	1-131-265-00	1-131-281-00
1.0			1-131-254-00	–	1-131-266-00	1-131-282-00
1.5		1-131-250-00	–	–	1-131-267-00	1-131-283-00
2.2		–	–	1-131-259-00	1-131-268-00	1-131-284-00
3.3		–	1-131-255-00	–	1-131-269-00	–
4.7		1-131-251-00	1-131-171-00	–	1-131-270-00	–
6.8		–	–	1-131-260-00	1-131-271-00	–
10	–	–	1-131-256-00	–	1-131-272-00	–
15	–	1-131-252-00	–	1-131-261-00		
22	–	–	1-131-257-00	–		
33	1-131-176-00	1-131-253-00	1-131-173-00	–		
47	1-131-288-00	1-131-174-00	–	–		
100	1-131-177-00					

1/4 WATT CARBON RESISTORS

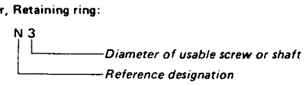
Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.
1.0	1-246-401-00	10	1-246-425-00	100	1-246-449-00	1.0k	1-246-473-00	10k	1-246-497-00	100k	1-246-521-00	1.0M	1-246-545-00
1.1	1-246-402-00	11	1-246-426-00	110	1-246-450-00	1.1k	1-246-474-00	11k	1-246-498-00	110k	1-246-522-00	1.1M	1-210-814-00
1.2	1-246-403-00	12	1-246-427-00	120	1-246-451-00	1.2k	1-246-475-00	12k	1-246-499-00	120k	1-246-523-00	1.2M	1-210-815-00
1.3	1-246-404-00	13	1-246-428-00	130	1-246-452-00	1.3k	1-246-476-00	13k	1-246-500-00	130k	1-246-524-00	1.3M	1-210-816-00
1.5	1-246-405-00	15	1-246-429-00	150	1-246-453-00	1.5k	1-246-477-00	15k	1-246-501-00	150k	1-246-525-00	1.5M	1-210-817-00
1.6	1-246-406-00	16	1-246-430-00	160	1-246-454-00	1.6k	1-246-478-00	16k	1-246-502-00	160k	1-246-526-00	1.6M	1-210-818-00
1.8	1-246-407-00	18	1-246-431-00	180	1-246-455-00	1.8k	1-246-479-00	18k	1-246-503-00	180k	1-246-527-00	1.8M	1-210-819-00
2.0	1-246-408-00	20	1-246-432-00	200	1-246-456-00	2.0k	1-246-480-00	20k	1-246-504-00	200k	1-246-528-00	2.0M	1-210-820-00
2.2	1-246-409-00	22	1-246-433-00	220	1-246-457-00	2.2k	1-246-481-00	22k	1-246-505-00	220k	1-246-529-00	2.2M	1-210-821-00
2.4	1-246-410-00	24	1-246-434-00	240	1-246-458-00	2.4k	1-246-482-00	24k	1-246-506-00	240k	1-246-530-00	2.4M	1-244-754-00
2.7	1-246-411-00	27	1-246-435-00	270	1-246-459-00	2.7k	1-246-483-00	27k	1-246-507-00	270k	1-246-531-00	2.7M	1-244-755-00
3.0	1-246-412-00	30	1-246-436-00	300	1-246-460-00	3.0k	1-246-484-00	30k	1-246-508-00	300k	1-246-532-00	3.0M	1-244-756-00
3.3	1-246-413-00	33	1-246-437-00	330	1-246-461-00	3.3k	1-246-485-00	33k	1-246-509-00	330k	1-246-533-00	3.3M	1-244-757-00
3.6	1-246-414-00	36	1-246-438-00	360	1-246-462-00	3.6k	1-246-486-00	36k	1-246-510-00	360k	1-246-534-00	3.6M	1-244-758-00
3.9	1-246-415-00	39	1-246-439-00	390	1-246-463-00	3.9k	1-246-487-00	39k	1-246-511-00	390k	1-246-535-00	3.9M	1-244-759-00
4.3	1-246-416-00	43	1-246-440-00	430	1-246-464-00	4.3k	1-246-488-00	43k	1-246-512-00	430k	1-246-536-00	4.3M	1-244-760-00
4.7	1-246-417-00	47	1-246-441-00	470	1-246-465-00	4.7k	1-246-489-00	47k	1-246-513-00	470k	1-246-537-00	4.7M	1-244-761-00
5.1	1-246-418-00	51	1-246-442-00	510	1-246-466-00	5.1k	1-246-490-00	51k	1-246-514-00	510k	1-246-538-00	5.1M	1-244-762-00
5.6	1-246-419-00	56	1-246-443-00	560	1-246-467-00	5.6k	1-246-491-00	56k	1-246-515-00	560k	1-246-539-00		
6.2	1-246-420-00	62	1-246-444-00	620	1-246-468-00	6.2k	1-246-492-00	62k	1-246-516-00	620k	1-246-540-00		
6.8	1-246-421-00	68	1-246-445-00	680	1-246-469-00	6.8k	1-246-493-00	68k	1-246-517-00	680k	1-246-541-00		
7.5	1-246-422-00	75	1-246-446-00	750	1-246-470-00	7.5k	1-246-494-00	75k	1-246-518-00	750k	1-246-542-00		
8.2	1-246-423-00	82	1-246-447-00	820	1-246-471-00	8.2k	1-246-495-00	82k	1-246-519-00	820k	1-246-543-00		
9.1	1-246-424-00	91	1-246-448-00	910	1-246-472-00	9.1k	1-246-496-00	91k	1-246-520-00	910k	1-246-544-00		

HARDWARE NOMENCLATURE

Screw:



Nut, Washer, Retaining ring:



Reference Designation	Shape	Description	Remarks
SCREWS			
P		pan-head screw	binding-head (B) screw for replacement
PWH		pan-head screw with washer face	binding-head (B) screw and flat washer for replacement
PS PSP		pan-head screw with spring washer	binding-head (B) screw and spring washer for replacement
PSW PSPW		pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement
R		round-head screw	binding-head (B) screw for replacement
K		flat-countersunk-head screw	
RK		oval-countersunk-head screw	
B		binding-head screw	
T		truss-head screw	binding-head (B) screw for replacement
F		flat-fillister-head screw	
RF		fillister-head screw	
BV		braizer-head screw	

Reference Designation	Shape	Description	Remarks
SELF-TAPPING SCREWS			
TA		self-tapping screw	ex: TA, P 3 x 10
PTP		pan-head self-tapping screw	binding-head self-tapping (TA, B) screw for replacement
PTPWH		pan-head self-tapping screw with washer face	binding-head self tapping (TA, B) screw and flat washer for replacement
PTTWH		pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement
SET SCREWS			
SC		set screw	
SC		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
NUT			
N		nut	
WASHERS			
W		flat washer	
SW		spring washer	
LW		internal-tooth lock washer	ex: LW3, internal
LW		external-tooth lock washer	ex: LW3, external
RETAINING RINGS			
E		retaining ring	
G		grip-type retaining ring	

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